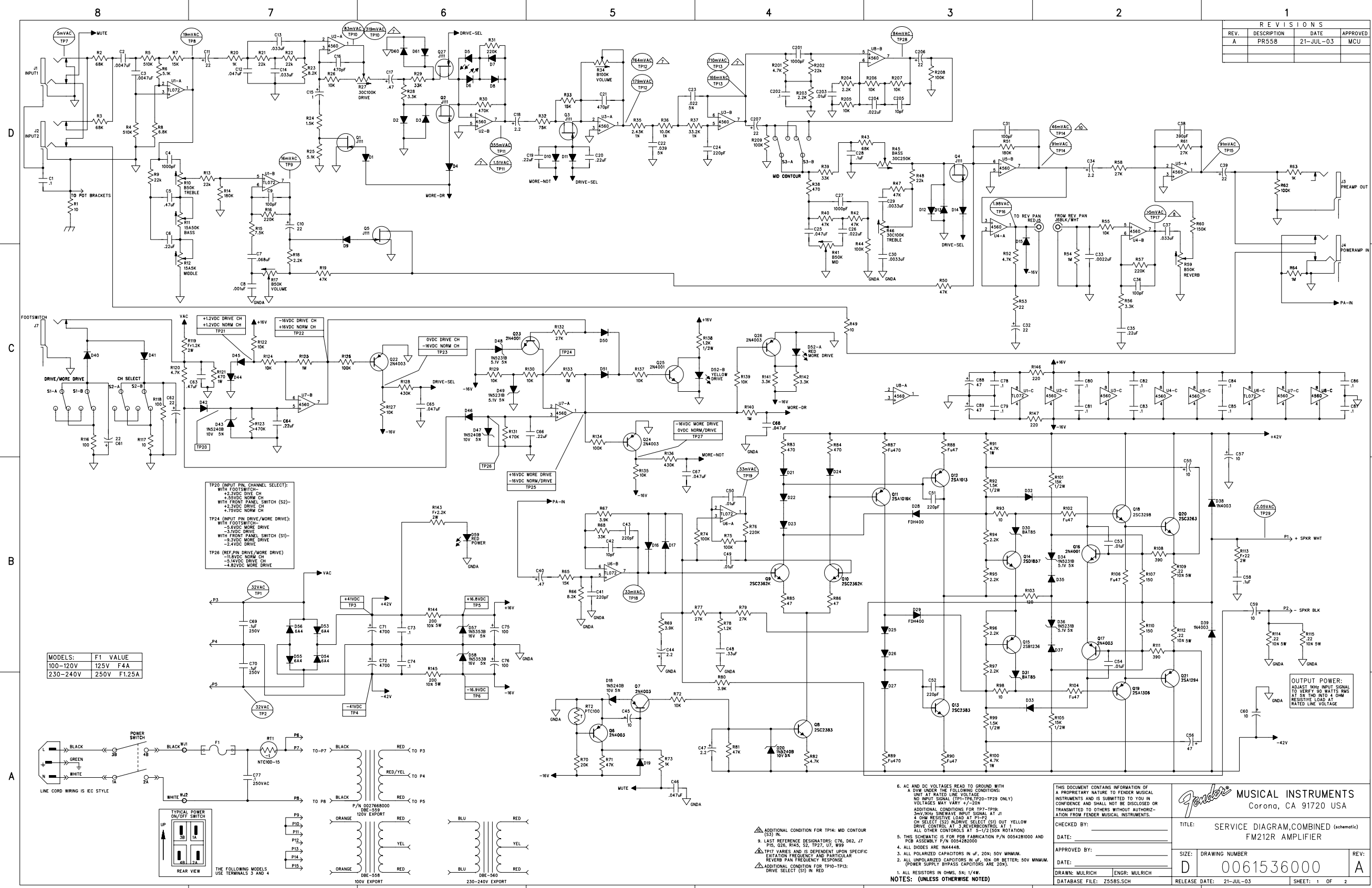
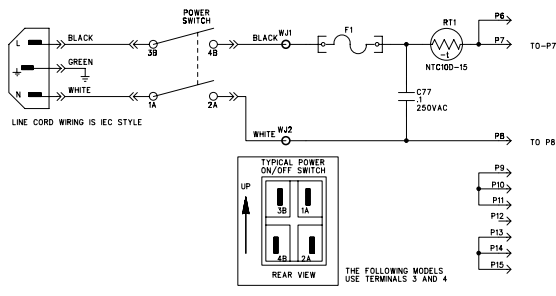


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR558	21-JUL-03	MCU



MODELS:	F1 VALUE
100-120V	125V F4A
230-240V	250V F1.25A



TP20 (INPUT PIN CHANNEL SELECT):  
 WITH FOOTSWITCH:  
 +12VDC DRIVE CH  
 +2.3VDC NORM CH  
 +3.0VDC NORM CH  
 WITH FRONT PANEL SWITCH (S2):  
 +2.3VDC DRIVE CH  
 +7.5VDC NORM CH

TP24 (INPUT PIN DRIVE/MORE DRIVE):  
 WITH FOOTSWITCH:  
 -5.6VDC MORE DRIVE  
 -3.5VDC NORM CH  
 WITH FRONT PANEL SWITCH (S1):  
 -5.6VDC MORE DRIVE  
 -2.4VDC DRIVE

TP26 (REF PIN DRIVE/MORE DRIVE):  
 -11.8VDC NORM CH  
 -5.14VDC DRIVE CH  
 -4.82VDC MORE DRIVE

- 6. AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:  
 UNIT AT RATED LINE VOLTAGE  
 NO INPUT SIGNAL (TP1-TP6, TP20-TP29 ONLY)  
 VOLTAGES MAY VARY +/-20%
- 7. LAST REFERENCE DESIGNATORS: C76, D62, J7, P15, Q26, R145, S2, TP27, U7, W99
- 8. TP17 VALUES ARE DEPENDENT UPON SPECIFIC EXCITATION FREQUENCY AND PARTICULAR REVERSE PAN FREQUENCY RESPONSE
- 9. ADDITIONAL CONDITION FOR TP10-TP13: DRIVE SELECT (S1) IN RED

1. ALL RESISTORS IN OHMS, S, K, M, OR W.
2. ALL UNPOLARIZED CAPACITORS IN UF, 100, OR BETTER; 50V MINIMUM POWER SUPPLY BYPASS CAPACITORS ARE 20K.
3. ALL DIODES ARE IN4004.
4. ALL TRANSISTORS ARE 2N4003.
5. THIS SCHEMATIC IS FOR PDB FABRICATION P/N 0054281000 AND PCB ASSSEMBLY P/N 0054282000
6. ADDITIONAL CONDITIONS FOR TP7-TP9:  
 30V DCM SINEWAVE INPUT SIGNAL AT J1  
 4 OHM RESISTIVE LOAD AT P1-P2  
 OR SELECT (S2) ALDRIVE SELECT (S1) OUT YELLOW DRIVE CONTROL AT 3 REVERSE CONTROL AT 1  
 ALL OTHER CONTROLS AT 50-1/2 (DCK ROTATION)

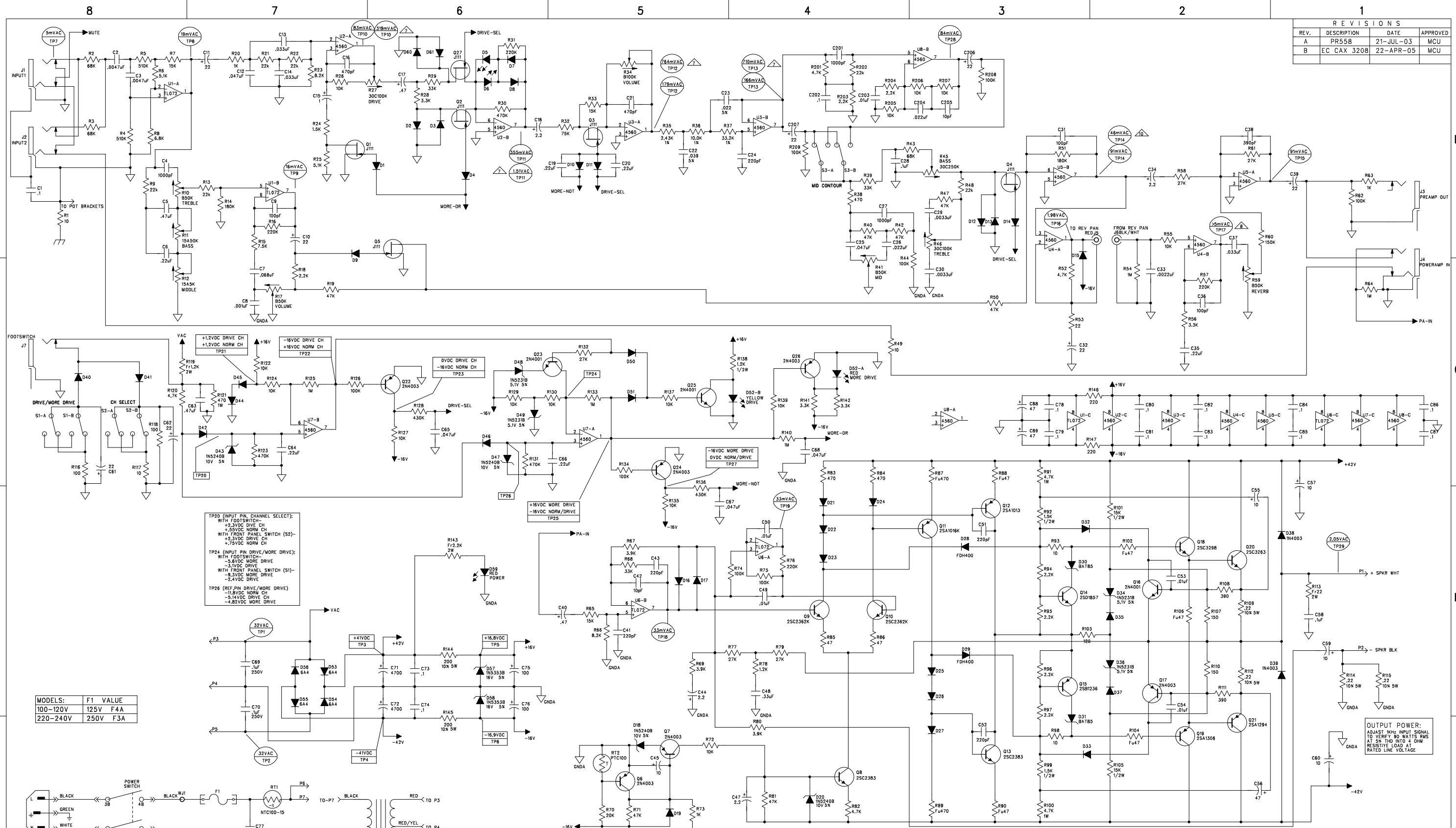
THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.

CHECKED BY: \_\_\_\_\_ TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
 DATE: \_\_\_\_\_ FM212R AMPLIFIER

APPROVED BY: \_\_\_\_\_ SIZE: DRAWING NUMBER  
 DATE: \_\_\_\_\_ D 0061536000  
 DATABASE FILE: Z5588.SCH ENGR: MULRICH REV: A  
 RELEASE DATE: 21-JUL-03 SHEET: 1 OF 2

OUTPUT POWER:  
 ADJUST 100HZ INPUT SIGNAL TO VERIFY SO WATS RMS AT 5% THD INTO 4 OHM RESISTIVE LOAD AT RATED LINE VOLTAGE

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR558	21-JUL-03	MCU
B	EC CAX 3208	22-APR-05	MCU

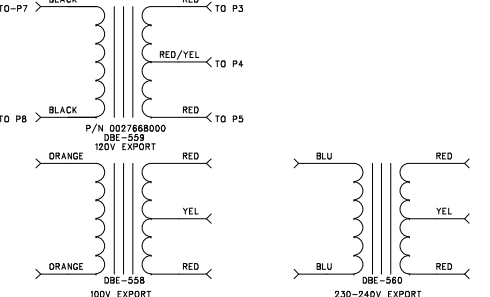
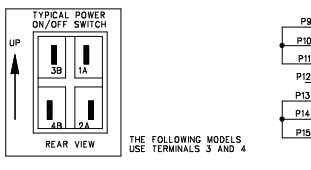
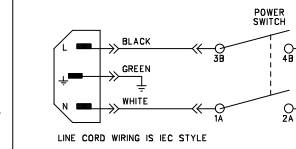


TP20 (INPUT PIN, CHANNEL SELECT):  
 WITH FOOTSWITCH:  
 +2.3VDC DRIVE CH  
 +2.5VDC NORM CH  
 WITH FRONT PANEL SWITCH (S2):  
 +2.3VDC DRIVE CH  
 +2.5VDC NORM CH

TP24 (INPUT PIN, DRIVE/MORE DRIVE):  
 WITH FOOTSWITCH:  
 -3.8VDC MORE DRIVE  
 WITH FRONT PANEL SWITCH (S1):  
 -3.1VDC DRIVE  
 -3.3VDC MORE DRIVE  
 -2.4VDC DRIVE

TP26 (REF. PIN, DRIVE/MORE DRIVE):  
 -1.8VDC NORM CH  
 -3.1VDC DRIVE CH  
 -4.8VDC MORE DRIVE

MODELS:	F1 VALUE
100-120V	125V F4A
220-240V	250V F3A



- 6. AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:  
 UNIT AT RATED LINE VOLTAGE.  
 NO INPUT SIGNAL (TP1-TP28 ONLY)  
 VOLTAGES MAY VARY +/- 20%
- ADDITIONAL CONDITIONS FOR TP7-TP9:  
 3mV RMS SINEWAVE INPUT SIGNAL AT J1  
 CH SELECT (S2) IN DRIVE SELECT (S1) OUT YELLOW DRIVE CONTROL AT 3 REVERB CONTROL AT 1  
 ALL OTHER CONTROLS AT 5-1/2 (50% ROTATION)
- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 005428000 AND PCB ASSEMBLY P/N 0054282000
- 4. ALL DIODES ARE 1N4448.
- 3. ALL POLARIZED CAPACITORS IN uF. 20% SOV MINIMUM.
- 2. ALL UNPOLARIZED CAPACITORS IN uF. 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20X).
- 1. ALL RESISTORS IN OHMS, 5% 1/4W.
- 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: \_\_\_\_\_

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

DATABASE FILE: Z558S.SCH

**Fender** MUSICAL INSTRUMENTS  
 Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
 FM212R AMPLIFIER

SIZE: D DRAWING NUMBER: 0061536000 REV: B

RELEASE DATE: 21-JUL-03 SHEET: 1 OF 2