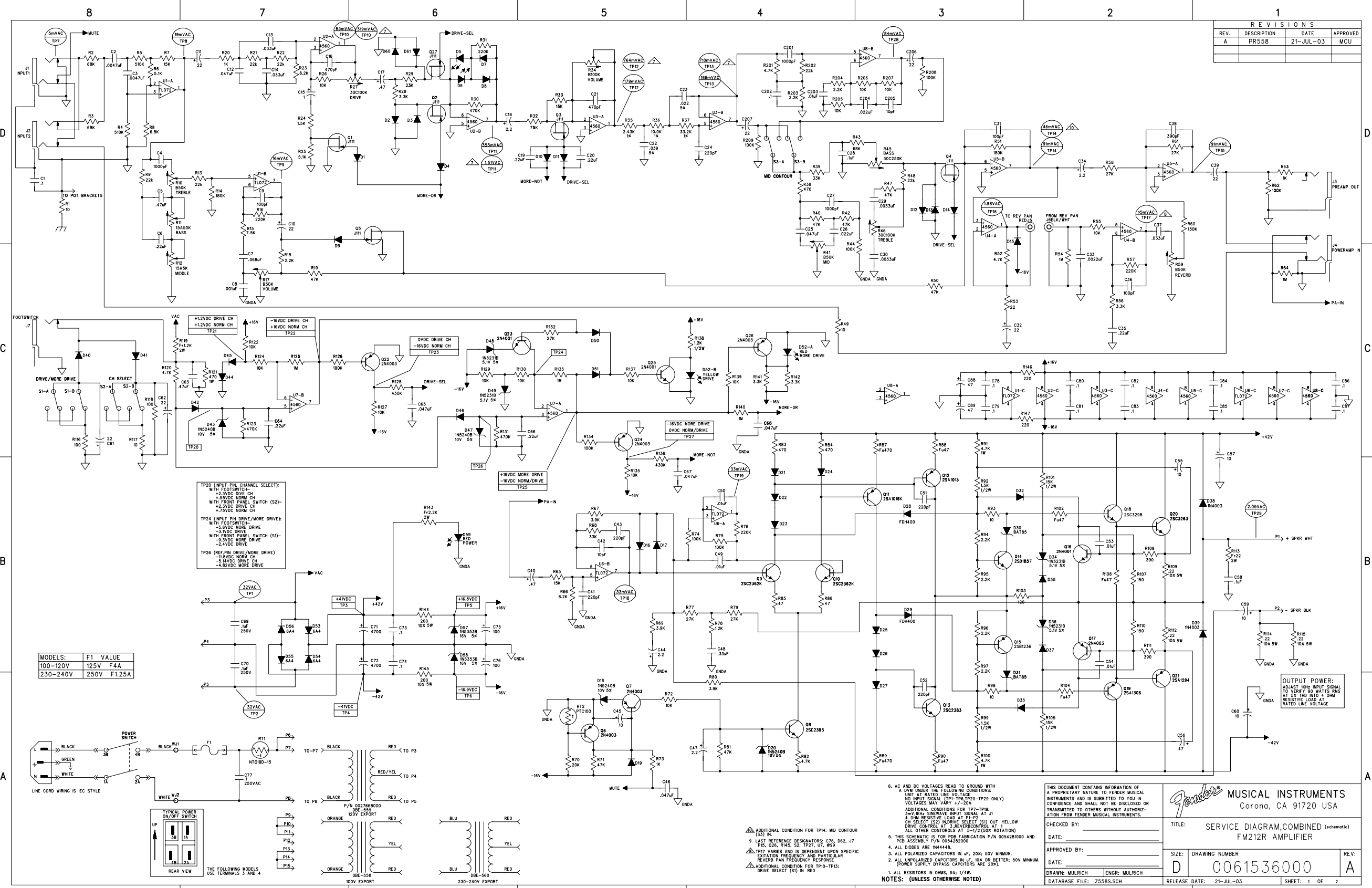


**231650000 FM-212R (non-serviceable)**

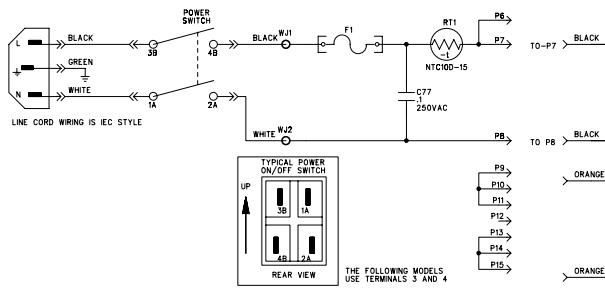
0062800000	INPUT JACK, FM212R, (ALL JACKS)	
0062801000	REVERB TANK, FM212R, AXL	
0062802000	KNOB, FM212R, AXL, (ALL KNOBS)	
0062803000	SPEAKER, FM212R, AXL	
0062804000	CONTROL, 100K 30C, FM212R	(DRIVE, DRIVE TREBLE)
0069529000	CONTROL, 100K B FM212R	(DRIVE VOLUME)
0069530000	CONTROL, 250K 30C, FM212R	(DRIVE BASS)
0069531000	CONTROL, 50K 15A, FM212R	(NORMAL BASS)
0069532000	CONTROL, 50K B, FM212R	(NORMAL TREBLE, NORMAL VOLUME, DRIVE MID, REVERB)
0069533000	CONTROL, 5K 15A, FM212R	(NORMAL MIDDLE)
0994062000	FOOTSWITCH	





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, P16, Q26, R145, S2, TP27, U7, W99
- 8. TP17 VALUES AND IS DEPENDENT UPON SPECIFIC EXCITATION FREQUENCY AND PARTICULAR REVERB PAN FREQUENCY RESPONSE
- 9. ADDITIONAL CONDITION FOR TP10-TP13: DRIVE SELECT (S1) IN RED

- 1. ALL RESISTORS IN OHMS, S, K, M, OR 1/4W.
- 2. ALL UNPOLARIZED CAPACITORS IN UF, 10% OR BETTER; 50V MINIMUM. POWER SUPPLY BYPASS CAPACITORS ARE 20%. ALL OTHER CAPACITORS AT 50V/50% (DOX ROTATION)
- 3. ALL DIODES ARE IN4004.
- 4. ALL TRANSISTORS ARE 2N4003.
- 5. THIS SCHEMATIC IS FOR P20 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 REVERB CONTROL AT 1  
 ALL OTHER CONTROLS AT 50/1/2 (DOX 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)

APPROVED BY: \_\_\_\_\_ SIZE: DRAWING NUMBER

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

DATABASE FILE: Z5588.SCH ENGR: MULRICH

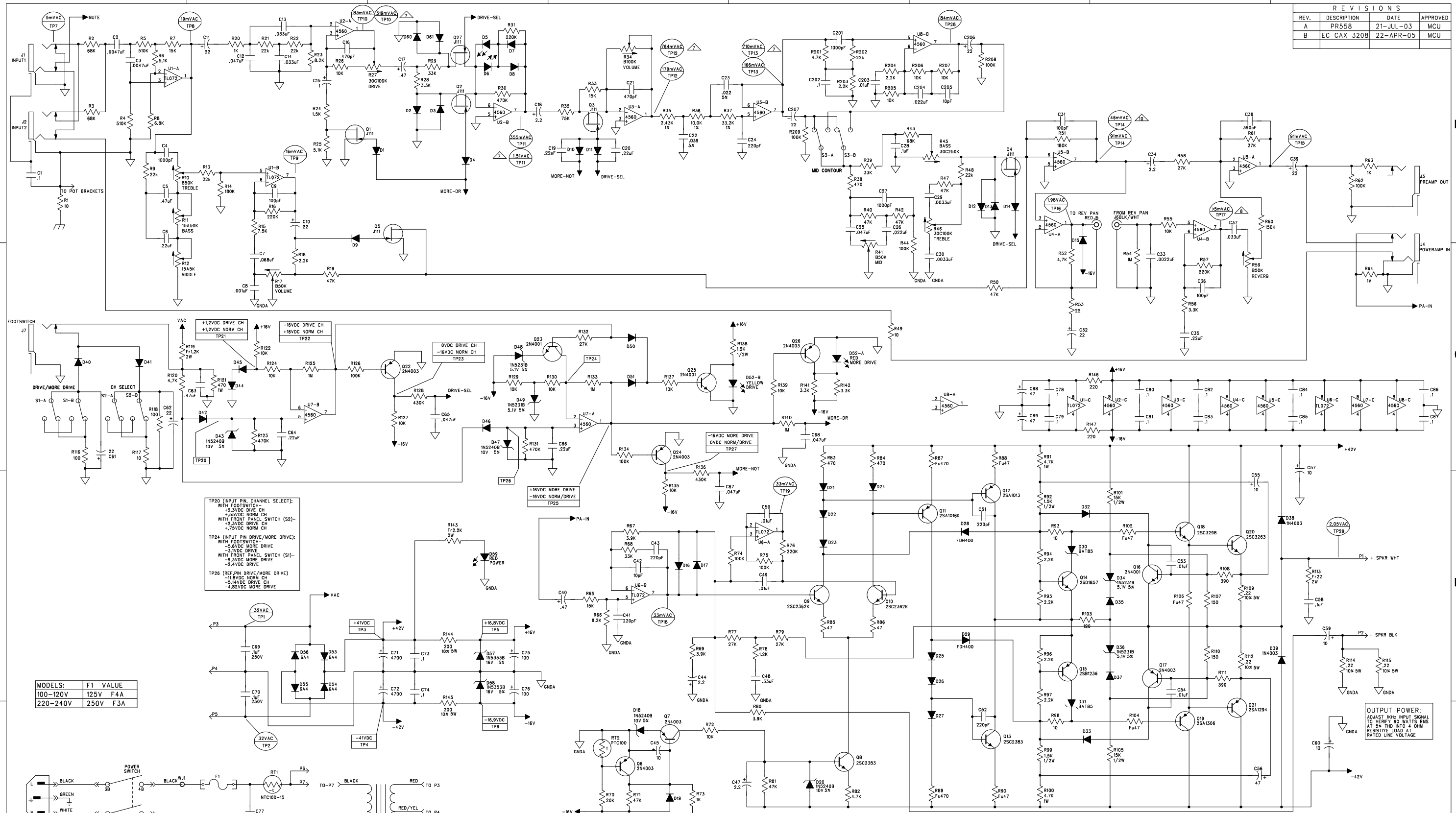
RELEASE DATE: 21-JUL-03 SHEET: 1 OF 2

Fender MUSICAL INSTRUMENTS  
 Corona, CA 91720 USA

0061536000

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

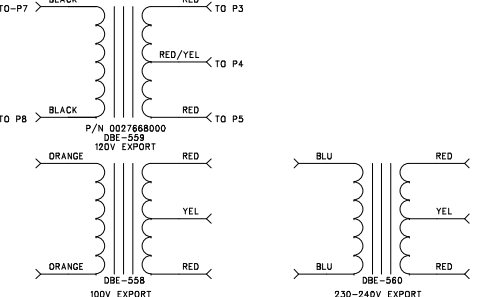
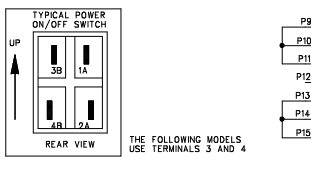
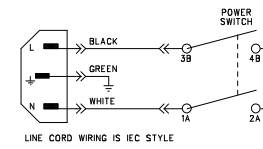


TP20 (INPUT PIN, CHANNEL SELECT):  
 WITH FOOTSWITCH:  
 +2.3VDC DRIVE CH  
 +2.5VDC NORM CH  
 WITH FRONT PANEL SWITCH (S2):  
 +2.3VDC DRIVE CH  
 +2.5VDC NORM CH

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

TP26 (REF. PIN, DRIVE/MORE DRIVE):  
 -1.8VDC NORM CH  
 -3.1VDC DRIVE CH  
 -4.2VDC MORE DRIVE

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



- 1. ALL RESISTORS IN OHMS, 5% 1/4W.
- 2. ALL POLARIZED CAPACITORS IN uF, 20% SOV MINIMUM.
- 3. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM.
- 4. ALL DIODES ARE IN4448A.
- 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 005428000 AND PCB ASSEMBLY P/N 0054282000.
- 6. AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:  
 UNIT AT RATED LINE VOLTAGE.  
 NO INPUT SIGNAL (TP1-TP29 ONLY).  
 VOLTAGES MAY VARY +/-20%.
- 7. 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).
- 8. LAST REFERENCE DESIGNATORS: C78, D82, J7, P15, Q26, R145, S2, TP27, U7, W99.
- 9. TP17 VARIES AND IS DEPENDENT UPON SPECIFIC EXCITATION FREQUENCY AND PARTICULAR REVERB PAN FREQUENCY RESPONSE.
- 10. ADDITIONAL CONDITION FOR TP10-TP13: DRIVE SELECT (S1) IN RED.

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

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

DATABASE FILE: Z558S.SCH

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 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