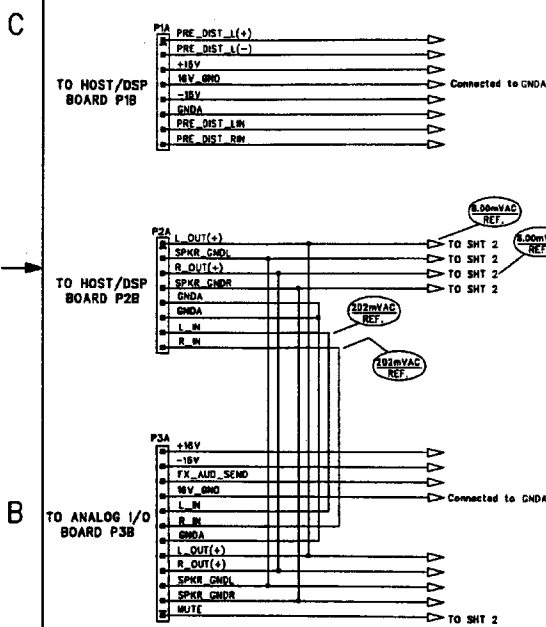
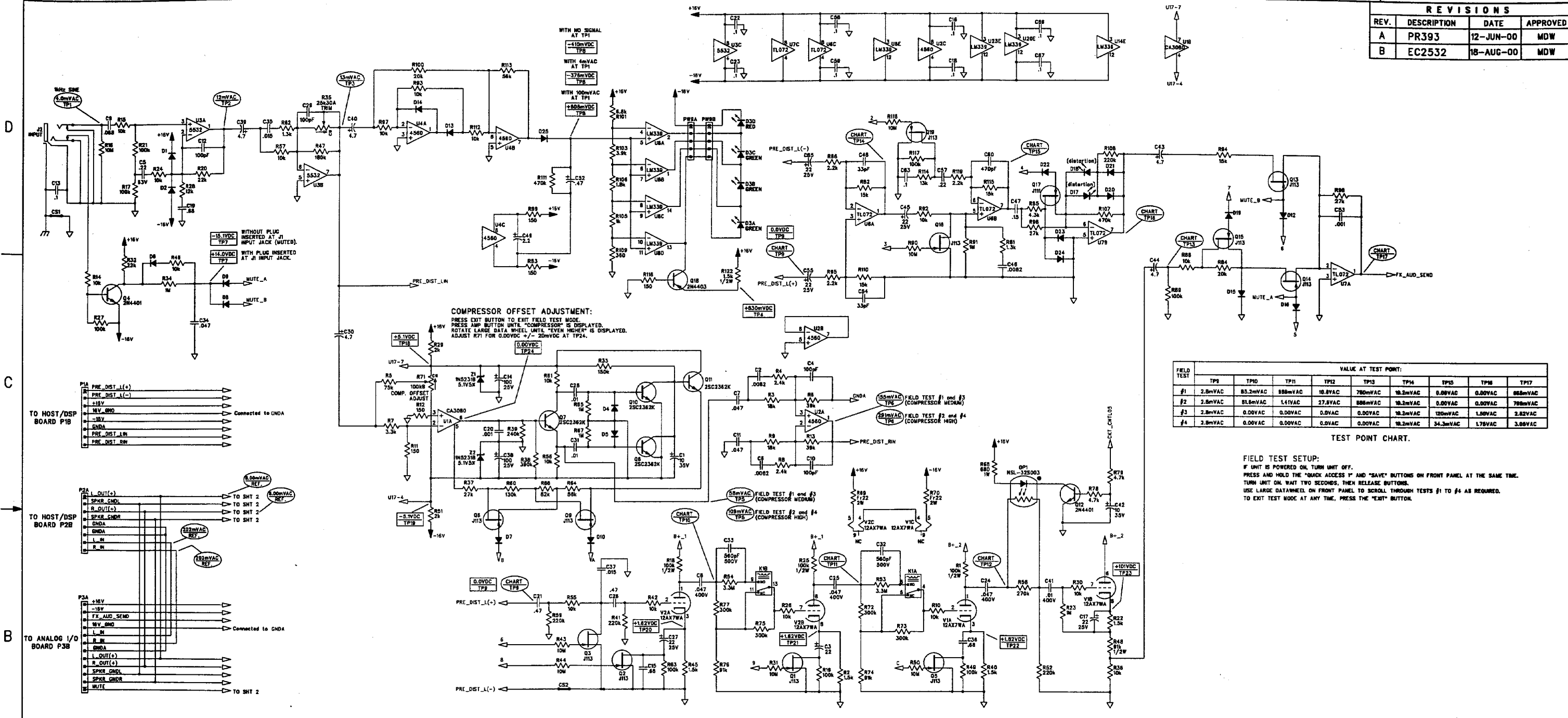


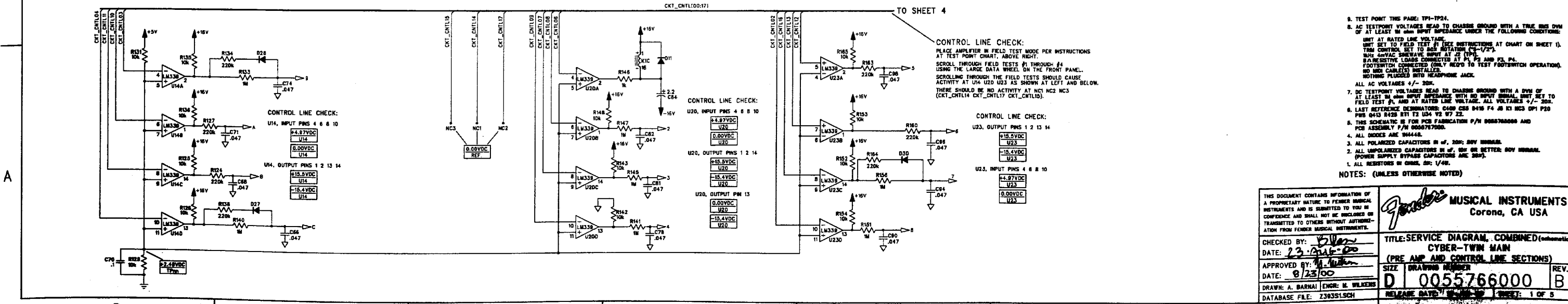
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC2532	18-AUG-00	MDW



FIELD TEST	VALUE AT TEST POINT:								
	TP9	TP10	TP11	TP12	TP13	TP14	TP15	TP16	TP17
#1	2.8mVAC	85.2mVAC	888mVAC	10.8VAC	780mVAC	10.2mVAC	0.00VAC	0.00VAC	868mVAC
#2	2.8mVAC	85.2mVAC	1.41VAC	27.8VAC	888mVAC	10.2mVAC	0.00VAC	0.00VAC	788mVAC
#3	2.8mVAC	0.00VAC	0.00VAC	0.0VAC	0.00VAC	10.2mVAC	120mVAC	1.80VAC	2.82VAC
#4	2.8mVAC	0.00VAC	0.00VAC	0.0VAC	0.00VAC	10.2mVAC	34.3mVAC	1.78VAC	3.88VAC

TEST POINT CHART.

FIELD TEST SETUP:
 IF UNIT IS POWERED ON, TURN UNIT OFF.
 PRESS AND HOLD THE "MARK ACCESS" AND "SAVE" BUTTONS ON FRONT PANEL AT THE SAME TIME.
 TURN UNIT ON, WAIT TWO SECONDS, THEN RELEASE BUTTONS.
 USE LARGE DATAWHEEL ON FRONT PANEL TO SCROLL THROUGH TESTS #1 TO #4 AS REQUIRED.
 TO EXIT TEST MODE AT ANY TIME, PRESS THE "EXIT" BUTTON.



- TEST POINT THIS PAGE: TP1-TP24.
- AC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A TRUE RMS DVM OF AT LEAST 10 OHM INPUT IMPEDANCE UNDER THE FOLLOWING CONDITIONS:
 UNIT AT RATED LINE VOLTAGE.
 UNIT SET TO FIELD TEST #1 (SEE INSTRUCTIONS AT CHART ON SHEET 1).
 TRIM CONTROL SET TO MAX POSITION (P1-1/P1-2).
 100mV AC SINEWAVE INPUT AT J2 (TP1).
 8mA RESISTIVE LOADS CONNECTED AT P1, P2 AND P3, P4.
 FOOTSWITCH CONNECTED (ONLY NEEDS TO TEST FOOTSWITCH OPERATION, NO MDR CABLE(S) INSTALLED).
 BOTH/NE PLUGGED INTO HEADPHONE JACK.
- DC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A DVM OF AT LEAST 10 OHM INPUT IMPEDANCE WITH NO INPUT SIGNAL, UNIT SET TO FIELD TEST #1, AND AT RATED LINE VOLTAGE. ALL VOLTAGES +/- .20%.
- LAST REFERENCE DENOMINATORS: C400 C500 C416 F4 A0 K1 NC3 D01 P20 P08 Q413 R428 R11 T2 U34 V2 W7 X2.
- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0065766000 AND PCB ASSEMBLY P/N 0065767000.
- ALL DIMENSIONS ARE IN MILLIMETERS.
- ALL POLARIZED CAPACITORS IN uF, 20% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 200uF).
- ALL RESISTORS IN OHMS, 5% OR BETTER.

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

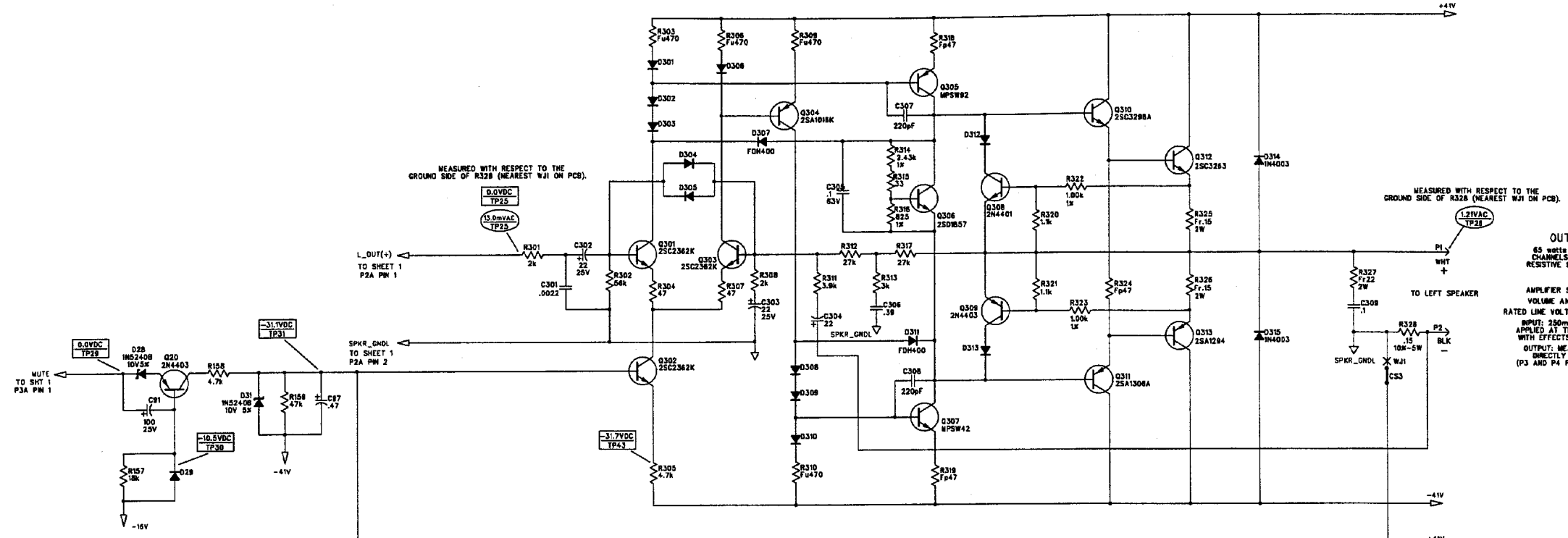
Fender MUSICAL INSTRUMENTS
 Corona, CA USA

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
 CYBER-TWIN MAIN
 (PRE AMP AND CONTROL LINE SECTIONS)

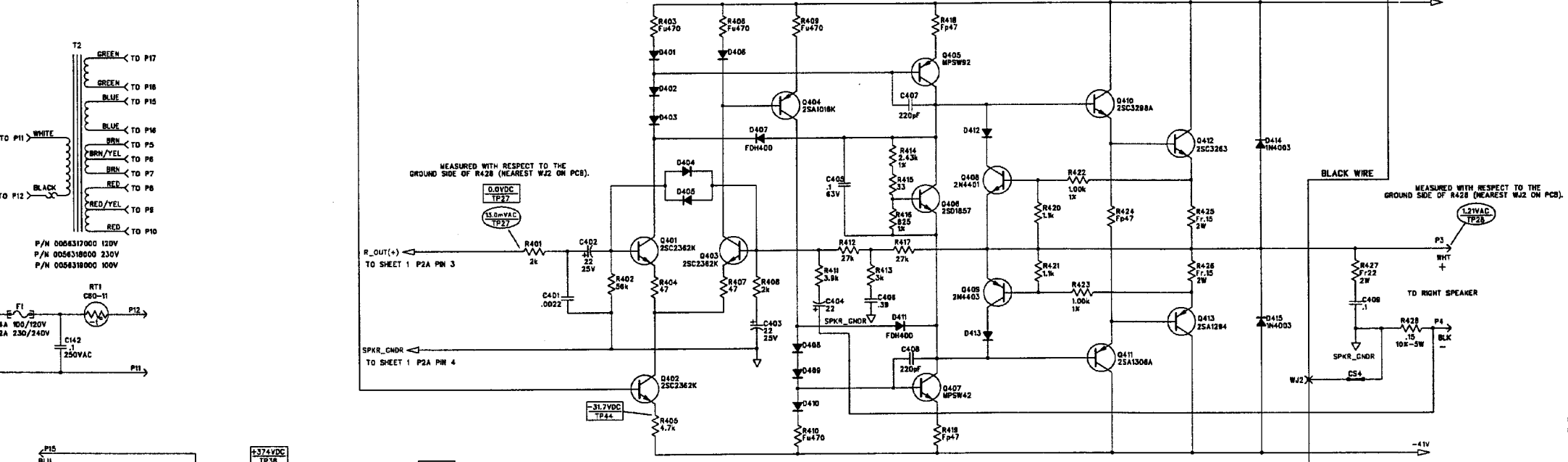
CHECKED BY: *[Signature]*
 DATE: 8/23/00
 APPROVED BY: *[Signature]*
 DATE: 8/23/00
 DRAWN: A. BARNAI ENGR: M. WILKERS
 DATABASE FILE: Z30351SCH

SIZE: DRAWING NUMBER
D 0055766000
 RELEASE DATE: 8/23/00 SHEET: 1 OF 5

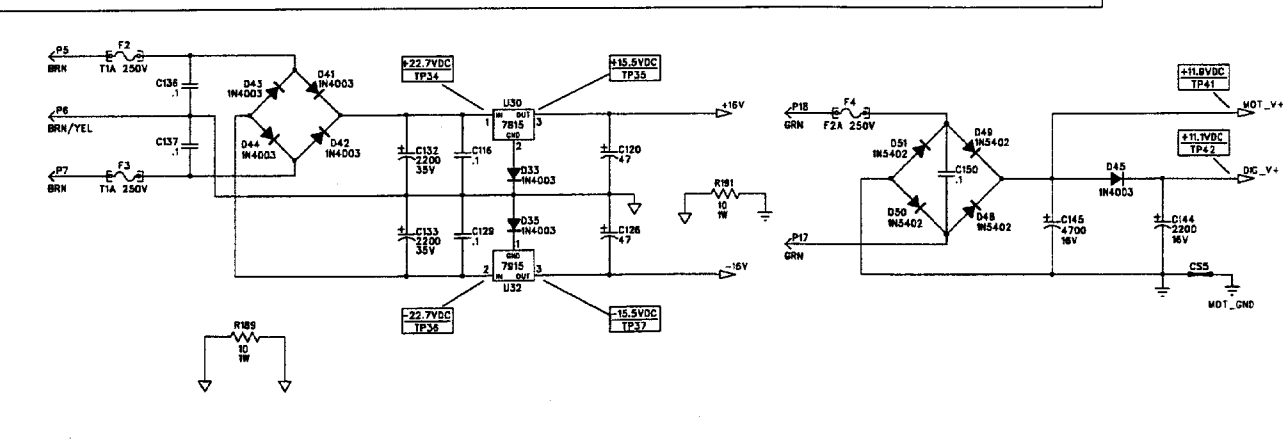
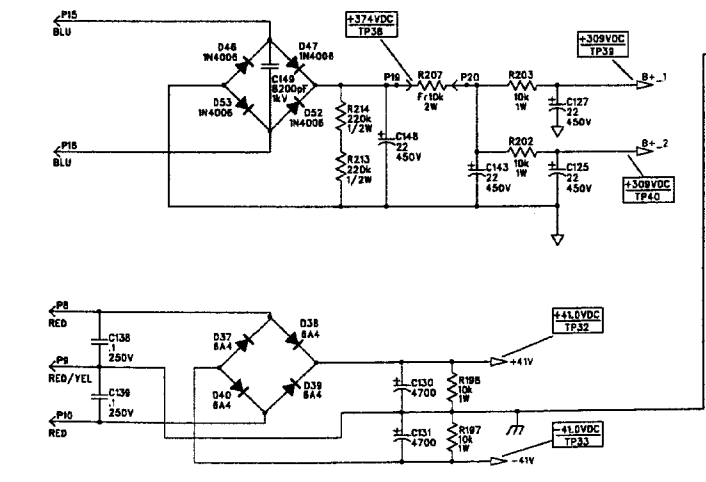
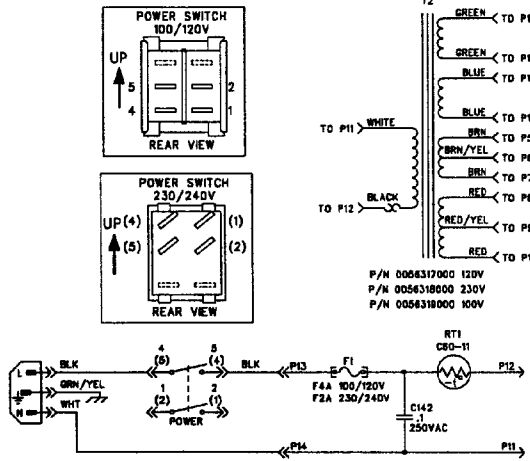
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC2532	18-AUG-00	MDW



OUTPUT TEST:
 65 watts PER CHANNEL BOTH CHANNELS DRIVEN INTO 8 ohm RESISTIVE LOADS, 8% THD, 1 kHz.
CONDITIONS:
 AMPLIFIER SET TO FIELD TEST #1. VOLUME AND MASTER FULL CW. RATED LINE VOLTAGE BETWEEN P11 AND P12.
INPUT: 250mVAC, 1 kHz SINE SIGNAL APPLIED AT THE L/MONO RETURN JACK WITH EFFECTS LEVEL SET TO -60dBV.
OUTPUT: MEASURED DIFFERENTIALLY DIRECTLY BETWEEN P1 AND P2 (P3 AND P4 FOR THE RIGHT CHANNEL).



OUTPUT TEST:
 65 watts PER CHANNEL BOTH CHANNELS DRIVEN INTO 8 ohm RESISTIVE LOADS, 8% THD, 1 kHz.
CONDITIONS:
 AMPLIFIER SET TO FIELD TEST #1. VOLUME AND MASTER FULL CW. RATED LINE VOLTAGE BETWEEN P11 AND P12.
INPUT: 250mVAC, 1 kHz SINE SIGNAL APPLIED AT THE L/MONO RETURN JACK WITH EFFECTS LEVEL SET TO -60dBV.
OUTPUT: MEASURED DIFFERENTIALLY DIRECTLY BETWEEN P1 AND P2 (P3 AND P4 FOR THE RIGHT CHANNEL).



6. TEST POINT THIS PAGE: TP25-TP44.
 8. AC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A TRUE RMS DVM OF AT LEAST 1M ohm INPUT IMPEDANCE UNDER THE FOLLOWING CONDITIONS:
 UNIT SET TO FIELD TEST #1 (SEE INSTRUCTIONS AT CHART ON SHEET 1). TRM CONTROL SET TO 50% ROTATION ("5-1/2").
 8.0VAC SINEWAVE INPUT AT J2 (P1).
 8.0 RESISTIVE LOADS CONNECTED AT P1, P2 AND P3, P4.
 FOOTSWITCH CONNECTED (ONLY REQ'D TO TEST FOOTSWITCH OPERATION).
 NO MDI CABLE(S) INSTALLED.
 NOTHING PLUGGED INTO HEADPHONE JACK.
 ALL AC VOLTAGES +/- 20%.
 7. DC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A DVM OF AT LEAST 1M ohm INPUT IMPEDANCE WITH NO INPUT SIGNAL. UNIT SET TO FIELD TEST #1, AND AT RATED LINE VOLTAGE. ALL VOLTAGES +/- 20%.
 8. LAST REFERENCE DESIGNATIONS: D408 CS3 D415 F4 J6 K1 M33 OPI P20 P18 Q415 R428 RT1 T2 U54 V2 W7 Z2.
 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 005576000 AND PCB ASSEMBLY P/N 0055767000.
 4. ALL DIODES ARE 1N4448.
 3. ALL POLARIZED CAPACITORS IN uF, 20% 50V MINIMUM.
 2. ALL UNPOLARIZED CAPACITORS IN uF, 50% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 1. ALL RESISTORS IN OHMS, 5% 1/4W.
NOTES: (UNLESS OTHERWISE NOTED)

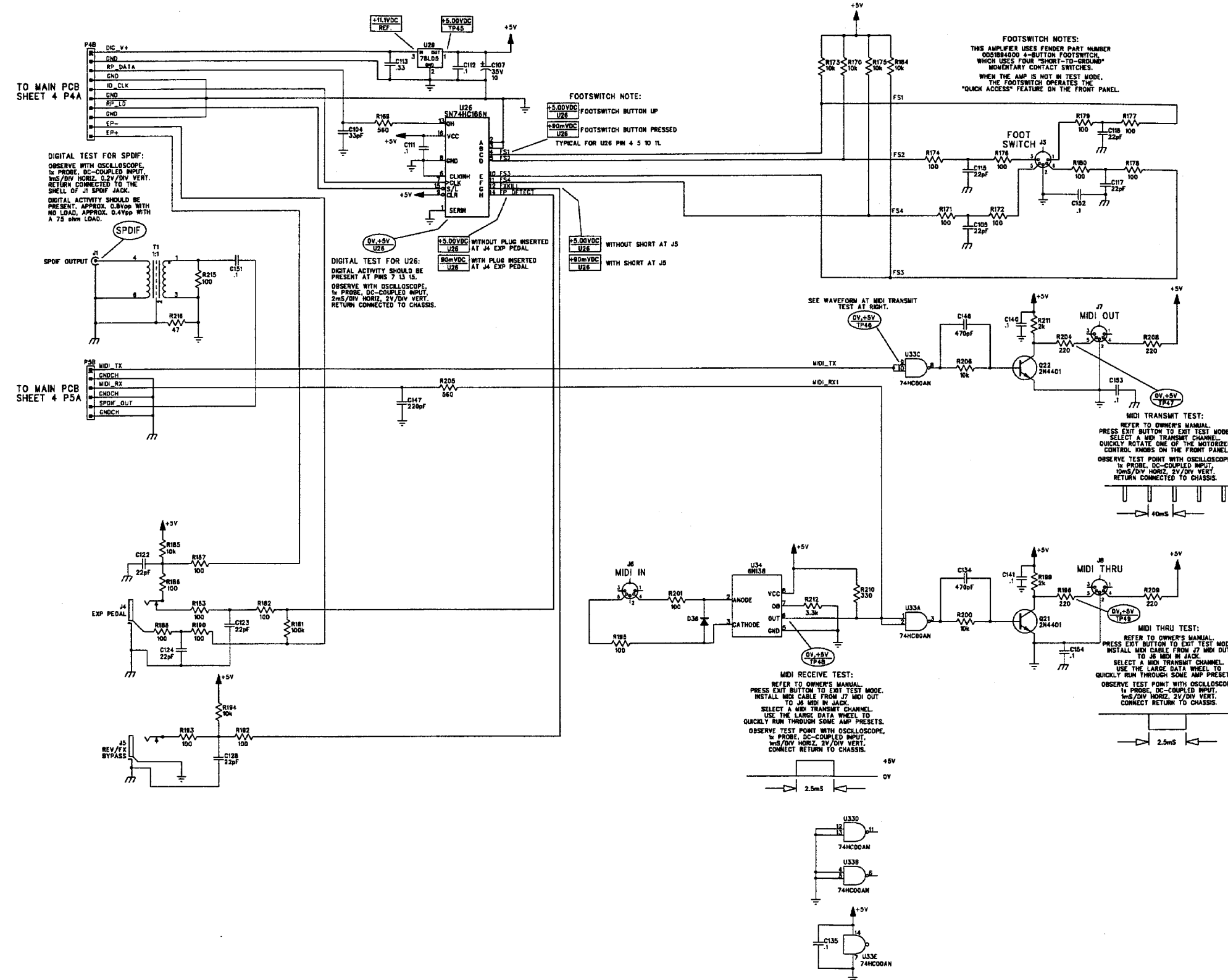
THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE REPRODUCED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.

Fender MUSICAL INSTRUMENTS
 Corona, CA USA

CHECKED BY: *[Signature]*
 DATE: 23-AUG-00
 APPROVED BY: *[Signature]*
 DATE: 8/23/00
 DRAWN: A BARNAI ENGR: M. WILKENS
 FILE: Z39351.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
 CYBER-TWIN MAIN
 (POWER SUPPLY AND POWER AMP SECTIONS)
 SIZE: DRAWING NUMBER: 0055766000
 REV. B
 RELEASE DATE: 12-JUN-00 SHEET: 2 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC2532	18-AUG-00	MDW



- TEST POINT THIS PAGE: TP45-TP48.
 - AC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A TRUE RMS DVM OF AT LEAST 1M ohm INPUT IMPEDANCE UNDER THE FOLLOWING CONDITIONS:
UNIT AT RATED LINE VOLTAGE.
UNIT SET TO FIELD TEST #1 (SEE INSTRUCTIONS AT CHART ON SHEET 1). TRIM CONTROL SET TO 50% ROTATION (1/2).
 - DC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A DVM OF AT LEAST 1M ohm INPUT IMPEDANCE WITH NO INPUT SIGNAL, UNIT SET TO FIELD TEST #1 AND AT RATED LINE VOLTAGE. ALL VOLTAGES +/- 20%.
 - LAST REFERENCE DESIGNATORS: C409 C58 D410 F4 J8 K1 NC3 OP1 P20 PWB Q413 R428 RT1 T2 U34 V2 W7 Z2
 - THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055766000 AND PCB ASSEMBLY P/N 0055767000.
 - ALL DIODES ARE 1N4148.
 - ALL POLARIZED CAPACITORS IN uf, 20% 50V MINIMUM.
 - ALL UNPOLARIZED CAPACITORS IN pf, 10% OR BETTER; 50V MINIMUM.
 - POWER SUPPLY BYPASS CAPACITORS ARE 200uf.
 - ALL RESISTORS IN OHMS, 5% 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)

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Fender MUSICAL INSTRUMENTS
Corona, CA USA

CHECKED BY: *B. DeW*
DATE: *23-AUG-00*

APPROVED BY: *M. Wilkens*
DATE: *8/23/00*

DRAWN: A. BARNAI ENGR: M. WILKENS
DATABASE FILE: 239351.SCH

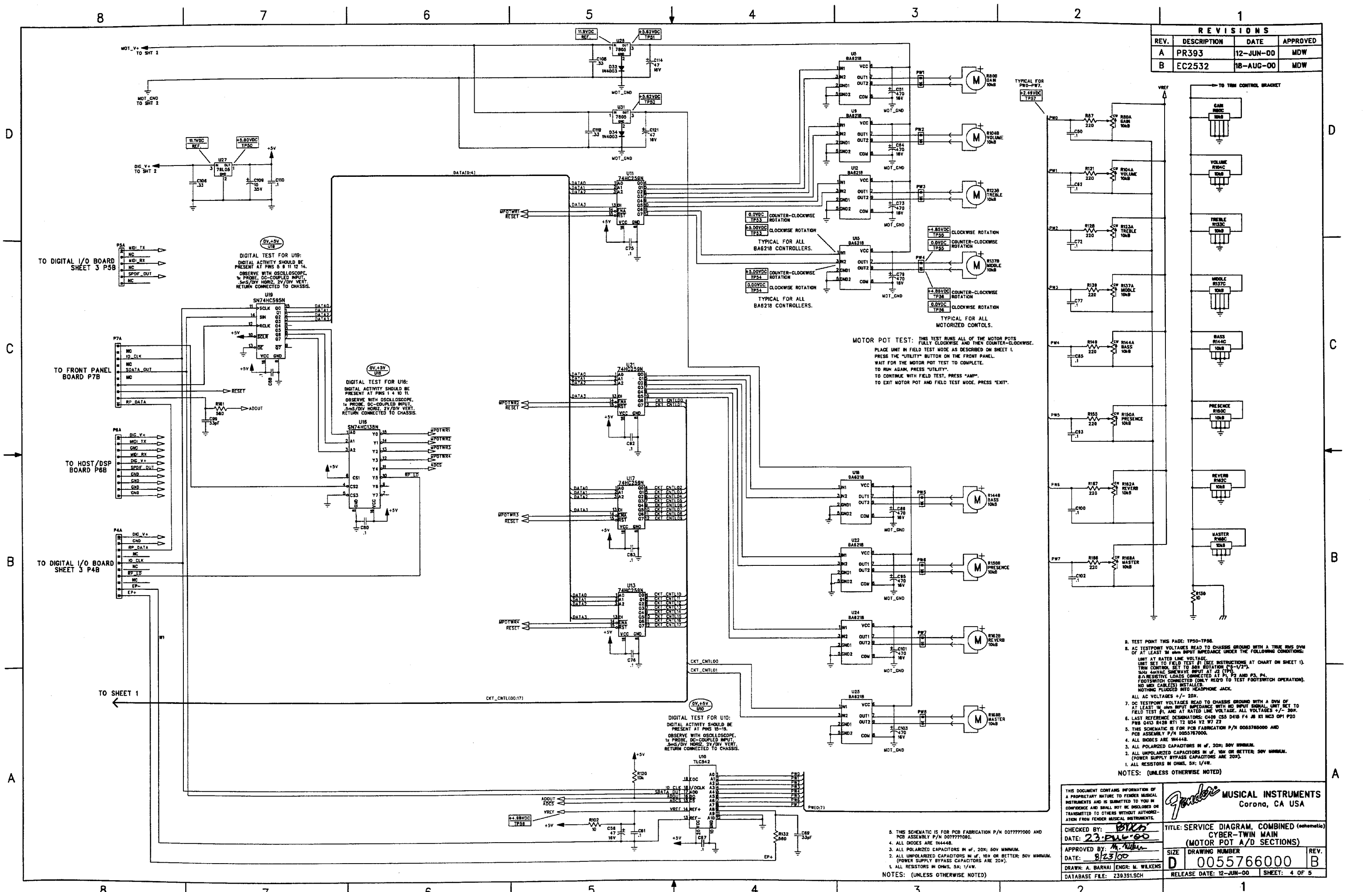
TITLE: SERVICE DIAGRAM, COMBINED (schematic) CYBER-TWIN MAIN (DIGITAL I/O BOARD SECTION)

SIZE: DRAWING NUMBER: REV. B

D 0055766000 B

RELEASE DATE: 12-JUN-00 SHEET: 3 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC2532	18-AUG-00	MDW



MOTOR POT TEST: THIS TEST RUNS ALL OF THE MOTOR POTS FULLY CLOCKWISE AND THEN COUNTER-CLOCKWISE. PLACE UNIT IN FIELD TEST MODE AS DESCRIBED ON SHEET 1. PRESS THE "UTILITY" BUTTON ON THE FRONT PANEL. WAIT FOR THE MOTOR POT TEST TO COMPLETE. TO RUN AGAIN, PRESS "UTILITY". TO CONTINUE WITH FIELD TEST, PRESS "AMP". TO EXIT MOTOR POT AND FIELD TEST MODE, PRESS "EXIT".

- TEST POINT THIS PAGE: TP50-TP58.
 - AC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A TRUE RMS DVM OF AT LEAST 1M OHM INPUT IMPEDANCE UNDER THE FOLLOWING CONDITIONS:
 UNIT SET TO FIELD TEST BY TEST INSTRUCTIONS AT CHART ON SHEET 1.
 TRIM CONTROL SET TO 50% ROTATION (C-1/2).
 100Hz 40VAC SIN WAVE INPUT AT J2 (TP1).
 8.0 RESISTIVE LOADS CONNECTED AT P1, P2 AND P3, P4.
 FOOTSWITCH CONNECTED (ONLY READ TO TEST FOOTSWITCH OPERATION).
 NO MID CABLE(S) INSTALLED.
 NOTHING PLUGGED INTO HEADPHONE JACK.
 - ALL AC VOLTAGES +/- 20%.
 - DC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A DVM OF AT LEAST 1M OHM INPUT IMPEDANCE WITH NO INPUT SIGNAL. UNIT SET TO FIELD TEST #1, AND AT RATED LINE VOLTAGE. ALL VOLTAGES +/- 20%.
 - LAST REFERENCE DESIGNATORS: C409 C55 D416 F4 J6 K1 M33 OPI P20 PWB 0413 R42B R11 T2 U54 V2 W7 Z2
 - THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055765000 AND PCB ASSEMBLY P/N 0055767000.
 - ALL BIPOLAR TRANSISTORS IN #. 20% 50V MINIMUM.
 - ALL UNPOLARIZED CAPACITORS IN #. 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 - ALL RESISTORS IN OHMS, 5% 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE OF 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: 23-Jul-00

APPROVED BY: *[Signature]*
DATE: 8/23/00

DRAWN: A. BARNAI ENGR: M. WILKENS
DATABASE FILE: Z39351.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
CYBER-TWIN MAIN
(MOTOR POT A/D SECTIONS)

SIZE: D
DRAWING NUMBER: 0055766000
REV. B

RELEASE DATE: 12-JUN-00
SHEET: 4 OF 5

- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055765000 AND PCB ASSEMBLY P/N 0055767000.
 - ALL OHMS ARE 1/4W.
 - ALL POLARIZED CAPACITORS IN #. 20%; 50V MINIMUM.
 - ALL UNPOLARIZED CAPACITORS IN #. 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 - ALL RESISTORS IN OHMS, 5% 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)

DIGITAL TEST FOR U19:
DIGITAL ACTIVITY SHOULD BE PRESENT AT PINS 5 8 11 12 14.
OBSERVE WITH OSCILLOSCOPE.
1% PROBE, DC-COUPLED INPUT.
3mS/DIV HORIZ, 2V/DIV VERT.
RETURN CONNECTED TO CHASSIS.

DIGITAL TEST FOR U16:
DIGITAL ACTIVITY SHOULD BE PRESENT AT PINS 1 4 10 11.
OBSERVE WITH OSCILLOSCOPE.
1% PROBE, DC-COUPLED INPUT.
3mS/DIV HORIZ, 2V/DIV VERT.
RETURN CONNECTED TO CHASSIS.

DIGITAL TEST FOR U10:
DIGITAL ACTIVITY SHOULD BE PRESENT AT PINS 15-19.
OBSERVE WITH OSCILLOSCOPE.
1% PROBE, DC-COUPLED INPUT.
3mS/DIV HORIZ, 2V/DIV VERT.
RETURN CONNECTED TO CHASSIS.

TO DIGITAL I/O BOARD SHEET 3 P5B

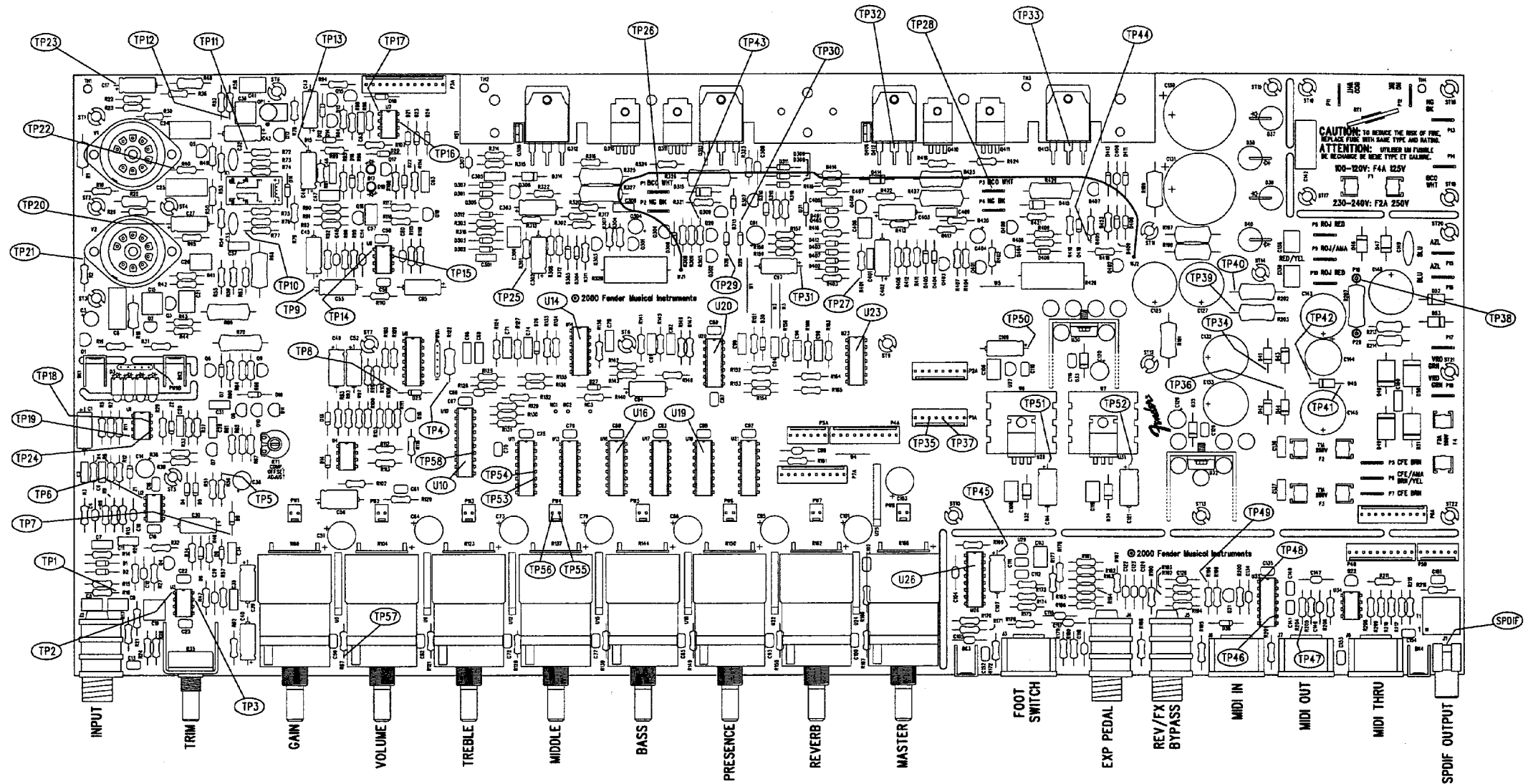
TO FRONT PANEL BOARD P7B

TO HOST/DSP BOARD P6B

TO DIGITAL I/O BOARD SHEET 3 P4B

TO SHEET 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 383	12-JUN-00	MDW
B	EC 2532	18-AUG-00	MDW



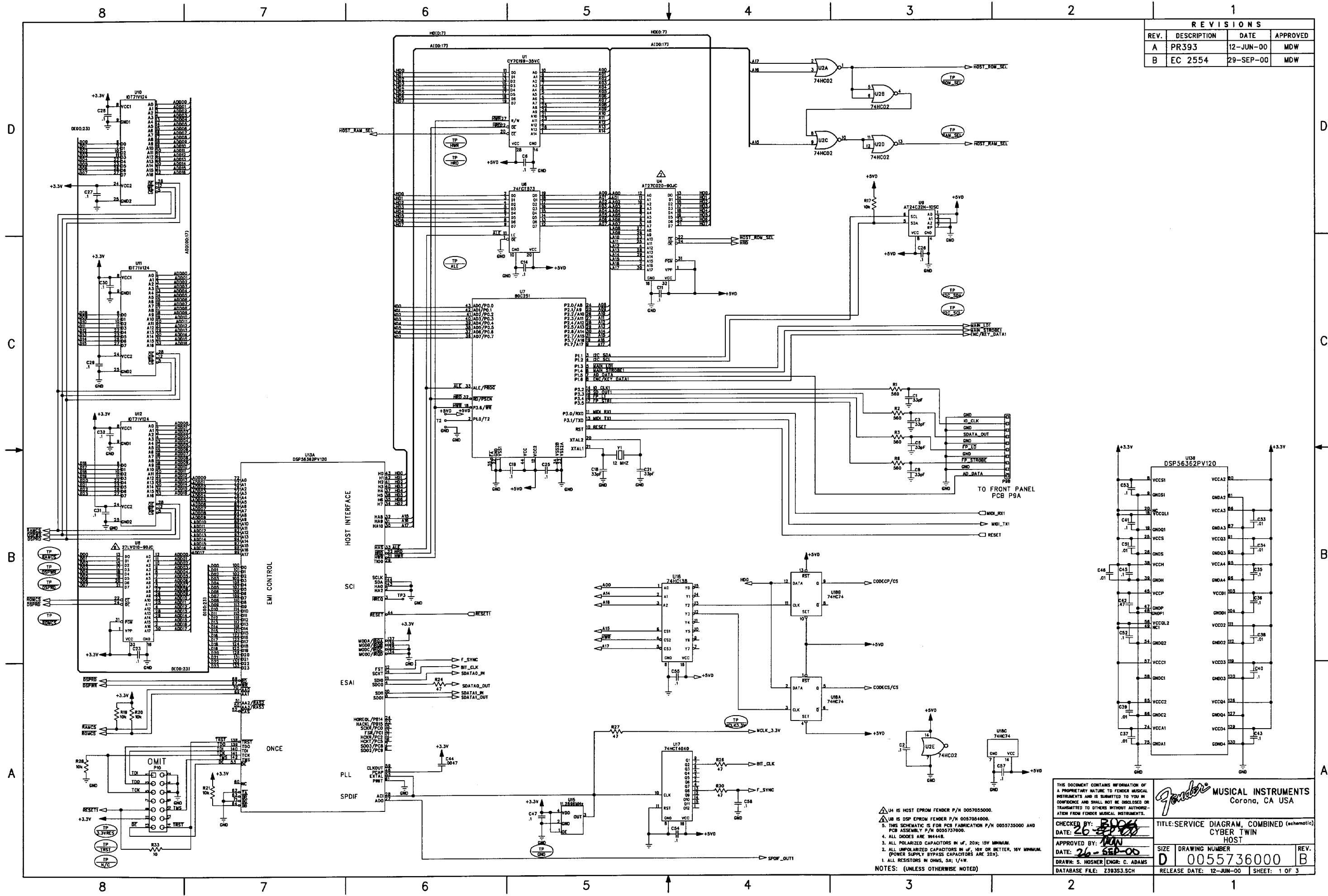
CAUTION: TO REDUCE THE RISK OF FIRE, REPLACE FUSE WITH SAME TYPE AND RATING.
 ATTENTION: WELDED IN FUSIBLE IN RECHANGE OF WIRE TYPE OR GAUGE.
 100-120V: F4A 125V
 230-240V: F2A 250V

FMA/WW: SERVICE DIAGRAM
 DATABASE: 2383PLPCB DATE: 18-AUG-00

- SEE SHEET 2 FOR PRIMARY WIRING.
 - SET SHEETS 1-4 FOR TEST CONDITIONS AND TEST POINT VALUES.
 - WIRES NOT SHOWN FOR CLARITY.
 - PCB ASSEMBLY SHOWN AS FABRICATED.
 - PW1-PW6 AND W5 NOT USED.
- NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: <i>MDW</i>	DATE: <i>23-AUG-00</i>	TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) CYBER-TWIN MAIN	
APPROVED BY: <i>MDW</i>	DATE: <i>8/23/00</i>	SIZE: D	DRAWING NUMBER: 0055766000
DRAWN: <i>MDW</i>	ENGR: <i>MDW</i>	RELEASE DATE: 12-JUN-00	SHEET 5 OF 5
DATABASE FILE: 2383PLPCB		REV. B	

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC 2554	29-SEP-00	MDW



- NOTES: (UNLESS OTHERWISE NOTED)
- U4 IS HOST EPROM FENDER P/N 0057055000.
 - U8 IS DSP EPROM FENDER P/N 0057004000.
 - THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055735000 AND PCB ASSEMBLY P/N 0055737000.
 - ALL DIODES ARE 1N4148.
 - ALL POLARIZED CAPACITORS IN uf, 20% 15V MINIMUM.
 - ALL UNPOLARIZED CAPACITORS IN uf, 10% OR BETTER, 16V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 - ALL RESISTORS IN OHMS, 5%, 1/4W.

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Fender MUSICAL INSTRUMENTS
Corona, CA USA

CHECKED BY: *[Signature]*
DATE: 26-SEP-00

APPROVED BY: *[Signature]*
DATE: 26-SEP-00

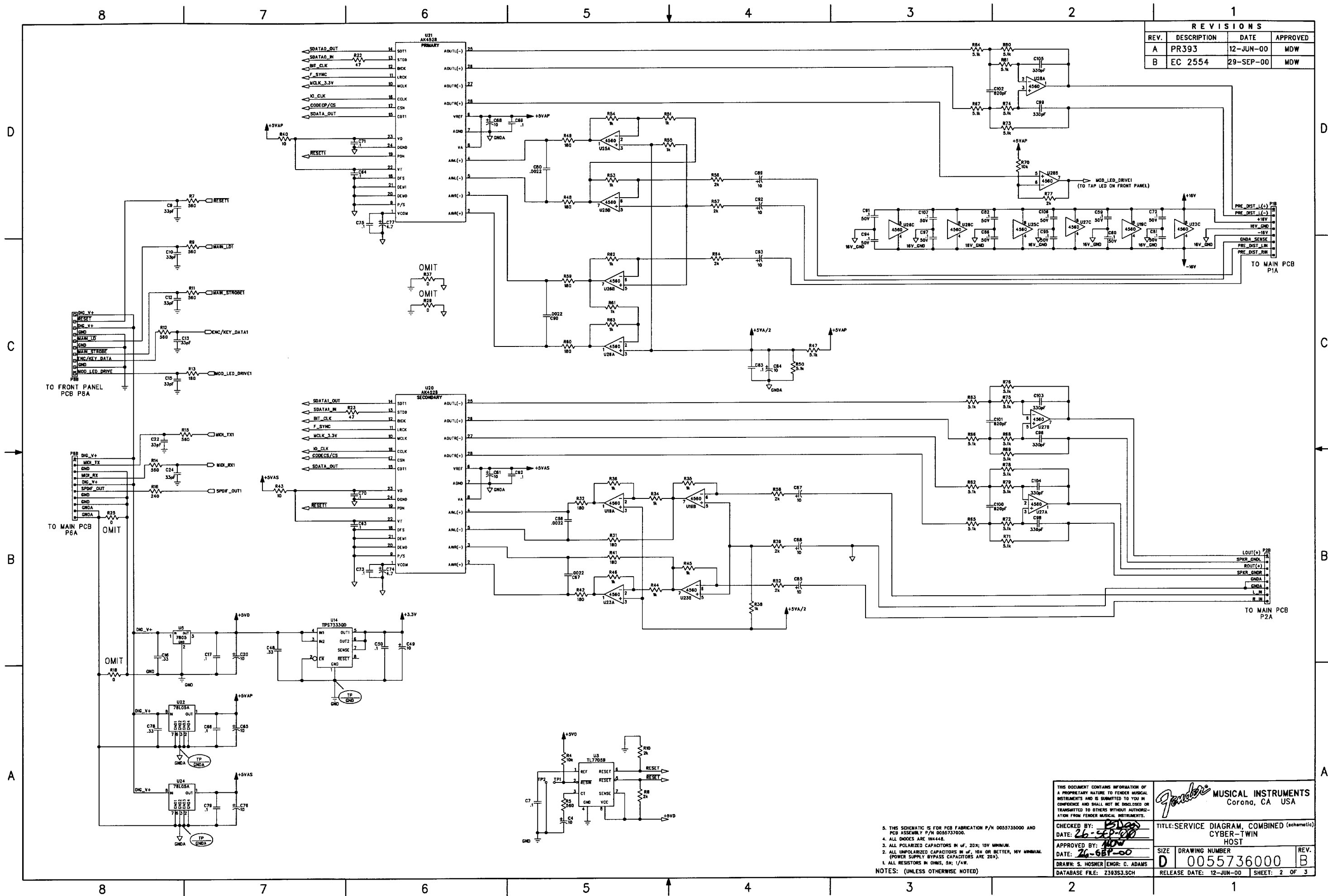
DRAWN: S. HOSNER/ENGR: C. ADAMS
DATABASE FILE: Z39353.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
CYBER TWIN
HOST

SIZE: D
DRAWING NUMBER: 0055736000
REV. B

RELEASE DATE: 12-JUN-00
SHEET: 1 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW
B	EC 2554	29-SEP-00	MDW



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Fender MUSICAL INSTRUMENTS
Corona, CA USA

CHECKED BY: *ESD*
DATE: 26-SEP-00

APPROVED BY: *MDW*
DATE: 26-SEP-00

DRAWN: S. HOSNER ENGR: C. ADAMS
DATABASE FILE: Z383S3.SCH

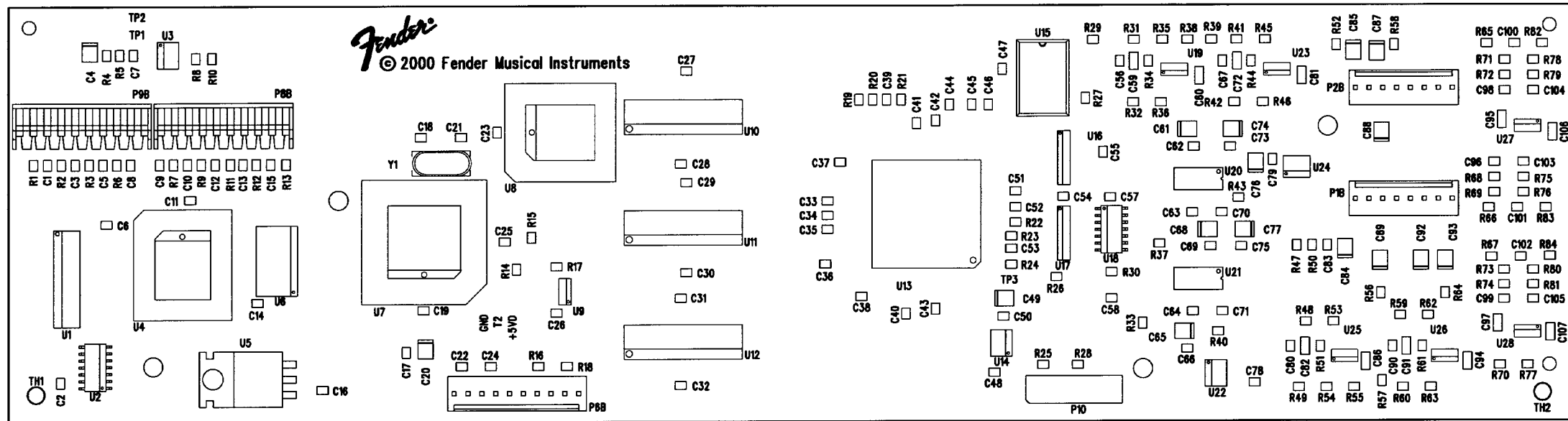
TITLE: SERVICE DIAGRAM, COMBINED (schematic)
CYBER-TWIN
HOST

SIZE: D
DRAWING NUMBER: 0055736000
REV. B

RELEASE DATE: 12-JUN-00 SHEET: 2 OF 3

5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055735000 AND PCB ASSEMBLY P/N 0055737000.
4. ALL DIODES ARE 1N4148.
3. ALL POLARIZED CAPACITORS IN μ F, 25V; 15V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN μ F, 10S OR BETTER, 16V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5K; 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 393	12-JUN-00	MDW
B	EC 2554	29-SEP-00	MDW

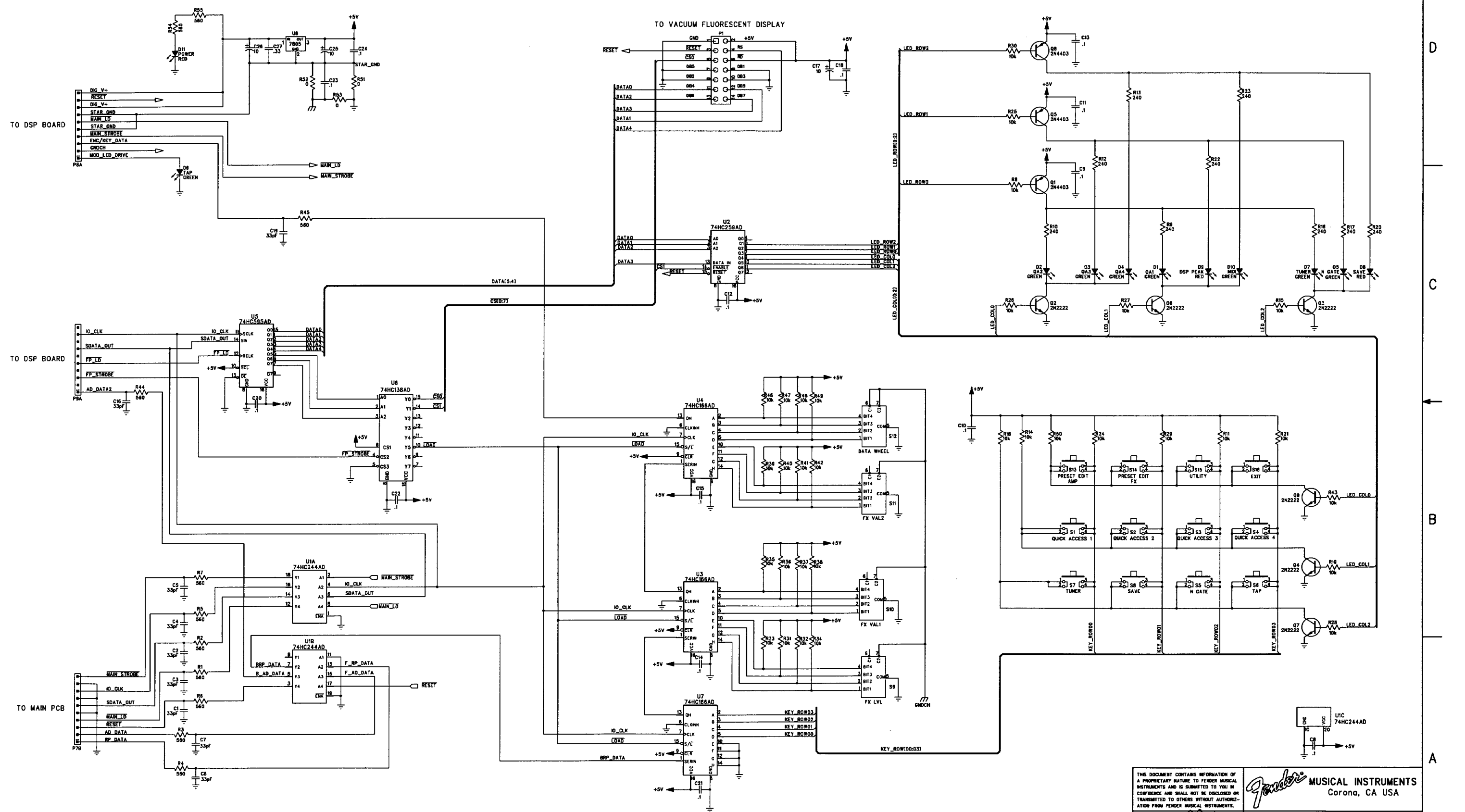


FILM/DWG:	SERVICE DIAGRAM
DATABASE:	Z393P3.PCB DATE: 29-SEP-00

2. P10 R18 R25 R29 R37 OMITTED.
 1. SEE SHEETS 1 AND 2 FOR SCHEMATIC.
 NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: <u>RS Dea</u> DATE: <u>26-SEP-00</u>		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) CYBER-TWIN HOST	
APPROVED BY: <u>M. Wilson</u> DATE: <u>26-SEP-00</u>		SIZE B	DRAWING NUMBER 0055736000
DRAWN: S. HOSNER ENGR: C. ADAMS		REV. B	SHEET 3 OF 3
DATABASE FILE: Z393P3.PCB		RELEASE DATE: 12-JUN-00	SHEET 3 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR393	12-JUN-00	MDW



- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055753000 AND PCB ASSEMBLY P/N 0055755000
 - ALL DIODES ARE 1N4148.
 - ALL POLARIZED CAPACITORS IN μ F, 20% 50V MINIMUM.
 - ALL UNPOLARIZED CAPACITORS IN μ F, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 - 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.

Fender MUSICAL INSTRUMENTS
Corona, CA USA

CHECKED BY: *MDW*
DATE: 12-JUN-00

APPROVED BY: *MDW*
DATE: 6/12/2000

DRAWN: S. HOSMER ENGR: C. ADAMS
DATABASE FILE: Z393S4.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
CYBER-TWIN
FRONT PANEL

SIZE: D
DRAWING NUMBER: 0055754000
REV. A

RELEASE DATE: 12-JUN-00 SHEET: 1 OF 2

8

7

6

5

4

3

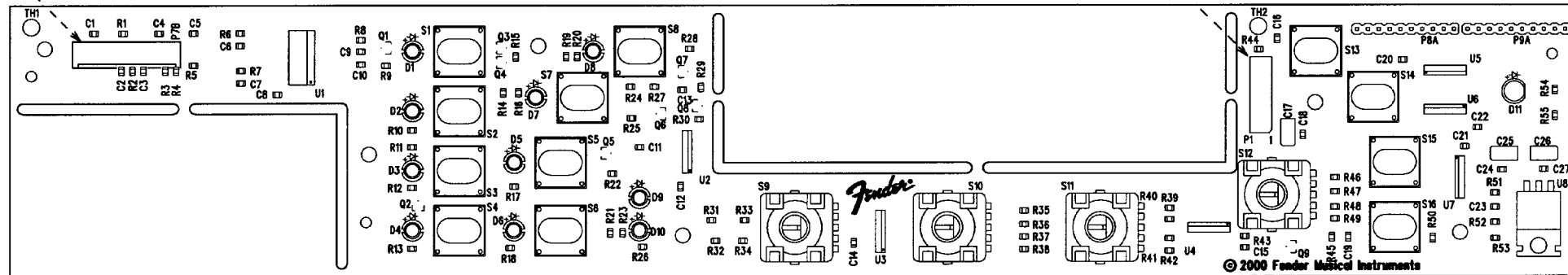
2

1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 393	12-JUN-00	MDW

P7B MOUNTS ON BACK SIDE OF PCB.

P1 MOUNTS ON BACK SIDE OF PCB.



FILM/DWG:	SERVICE DIAGRAM
DATABASE:	Z393P4.PCB DATE: 12-JUN-00

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: 13-JUN-00
APPROVED BY: *[Signature]*
DATE: 6/13/2000
DRAWN: S. HOSNER ENGR: C. ADAMS
DATABASE FILE: Z393P4.PCB

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
CYBER-TWIN
FRONT PANEL

SIZE	DRAWING NUMBER	REV.
C	0055754000	A

RELEASE DATE: 12-JUN-00 SHEET 2 OF 2

1. SEE SHEET 1 FOR SCHEMATIC.
NOTES: (UNLESS OTHERWISE NOTED)

8

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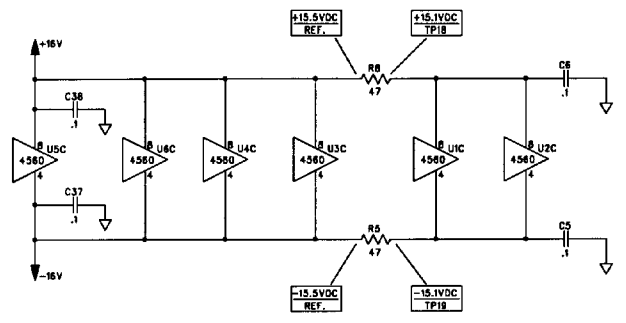
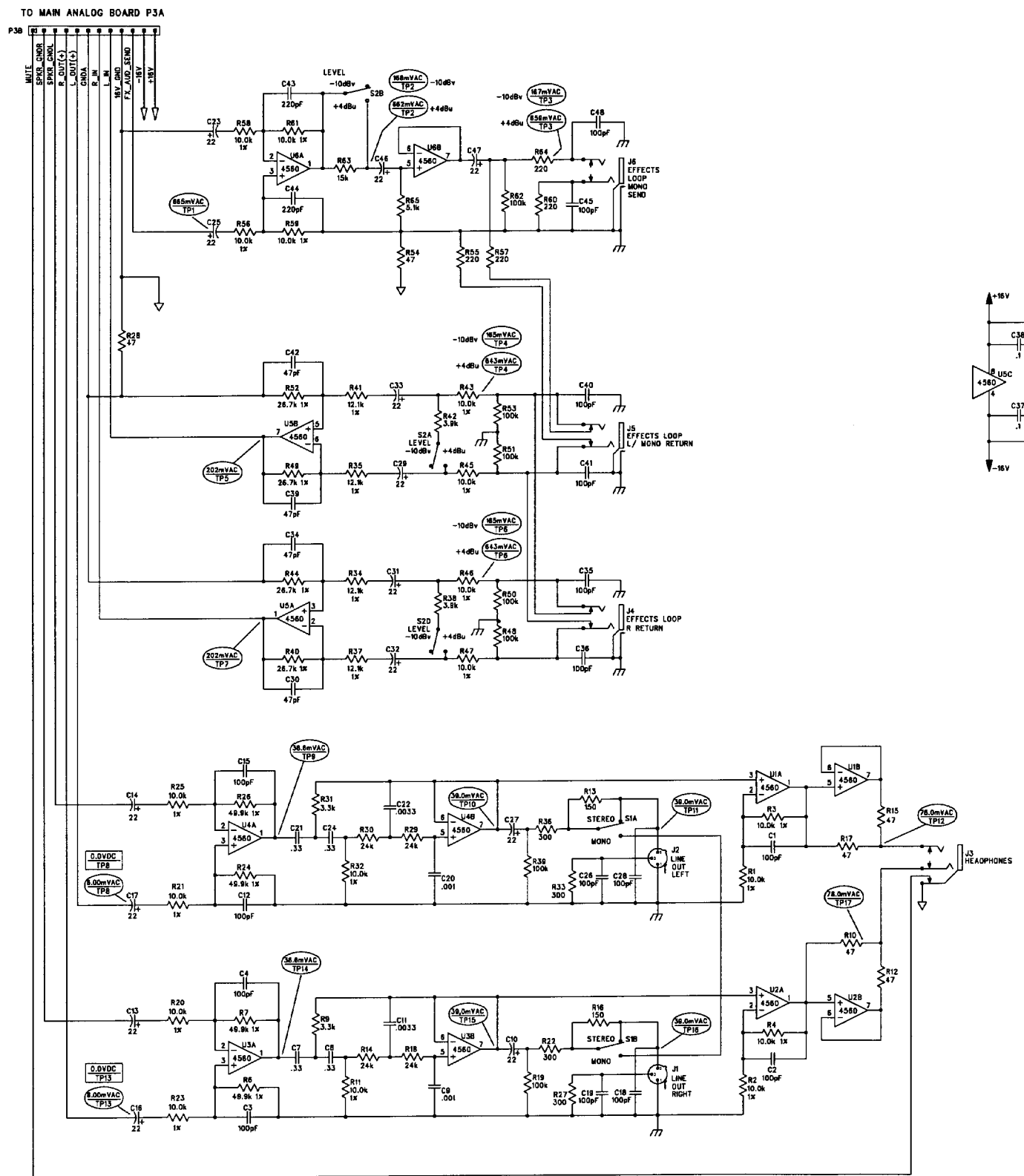
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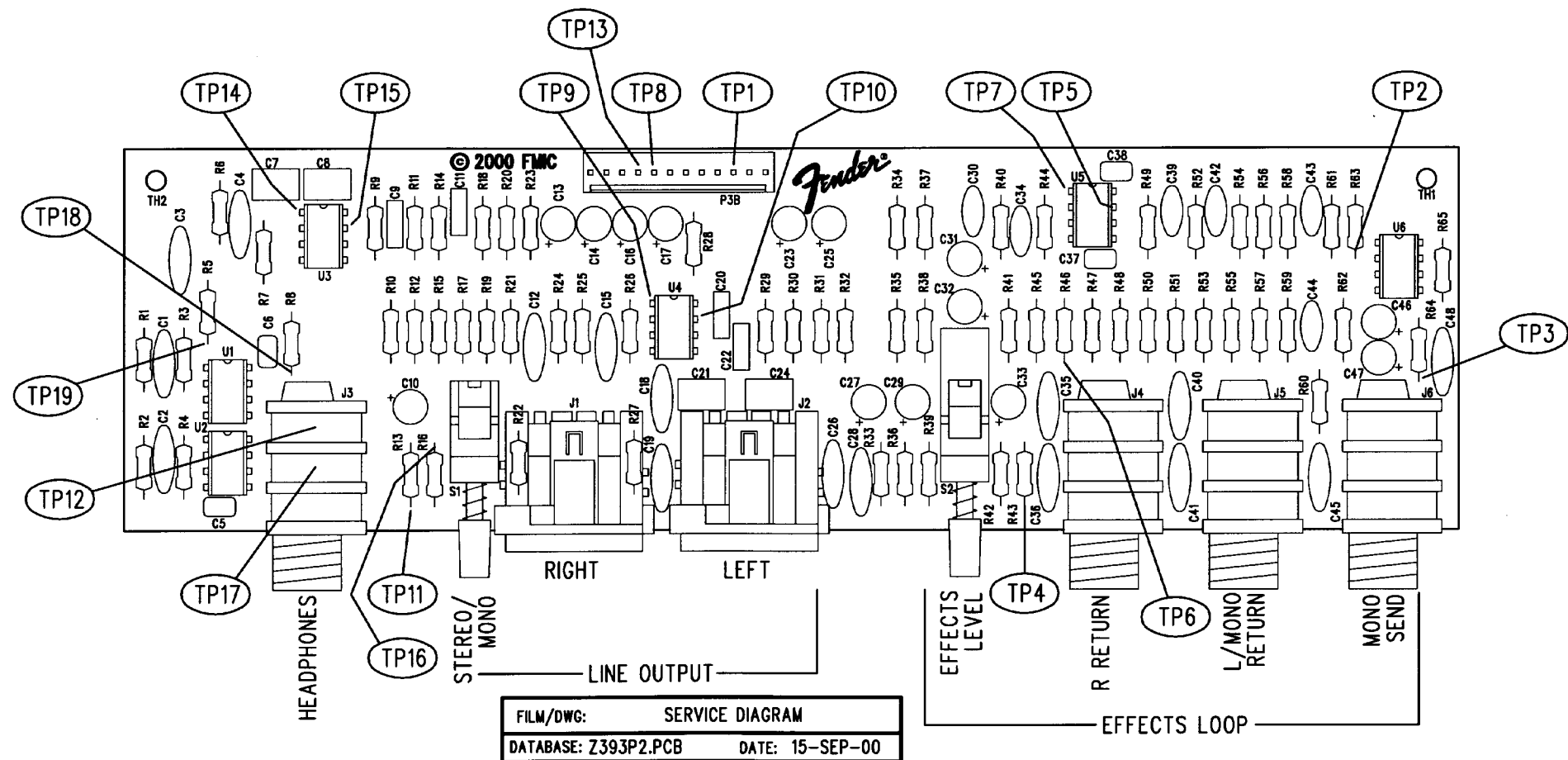
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 393	12-JUN-00	MDW
B	EC 2540	12-SEP-00	MDW



8. AC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A TRUE RMS DVM OF AT LEAST 1M OHM INPUT IMPEDANCE UNDER THE FOLLOWING CONDITIONS:
 UNIT AT RATED LINE VOLTAGE.
 UNIT SET TO FIELD TEST #1 (SEE SVC DIAG 0055786000 FOR INSTRUCTIONS).
 TRIM CONTROL SET TO 90° ROTATION (5°-1/2°).
 1kHz 4mVAC SINEWAVE INPUT AT J2 (TP1).
 8Ω RESISTIVE LOADS CONNECTED AT P1, P2 AND P3, P4.
 FOOTSWITCH CONNECTED (ONLY REQ'D TO TEST FOOTSWITCH OPERATION).
 NO MIDI CABLE(S) INSTALLED.
 NOTHING PLUGGED INTO HEADPHONE JACK.
 ALL AC VOLTAGES +/- 20%.
7. DC TESTPOINT VOLTAGES READ TO CHASSIS GROUND WITH A DVM OF AT LEAST 1M OHM INPUT IMPEDANCE WITH NO INPUT SIGNAL. UNIT SET TO FIELD TEST #1 AND AT RATED LINE VOLTAGE. ALL VOLTAGES +/- 20%. SEE SERVICE DIAGRAM 0055786000 FOR FIELD TEST INSTRUCTIONS.
6. LAST REFERENCE DESIGNATORS: C58, R6, P38, R55, S2, TP19, U5.
 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0056334000 AND PCB ASSEMBLY P/N 0056335000.
 4. ALL DIODES ARE 1N4448.
 3. ALL POLARIZED CAPACITORS IN uF, 20% 50V MINIMUM.
 2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 1. ALL RESISTORS IN OHMS, 5% 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: <i>blen</i>	DATE: <i>14-SEP-00</i>	TITLE: SERVICE DIAGRAM, COMBINED (schematic) CYBER-TWIN AMP ANALOG I/O PCB	
APPROVED BY: <i>MDW</i>	DATE: <i>14-SEP-00</i>	SIZE: D	DRAWING NUMBER: 00563333000
DRAWN: A. BARNAI ENGR: M. WILKENS		REV. B	
DATABASE FILE: Z39352.SCH		RELEASE DATE: 12-JUN-00	SHEET: 1 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 393	12-JUN-00	MDW
B	EC 2540	15-SEP-00	MDW



1. SEE SHEET 1 FOR TEST CONDITIONS AND TESTPOINT VALUES.
 NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: B. Reed
 DATE: 14-SEP-00

APPROVED BY: M. Wilkins
 DATE: 14-SEP-2000

DRAWN: S. HOSNER ENGR: M. WILKENS
 DATABASE FILE: Z393P2.PCB

Fender MUSICAL INSTRUMENTS
 Corona, CA USA

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
 CYBER-TWIN AMP
 ANALOG I/O BOARD

SIZE	DRAWING NUMBER	REV.
B	0056333000	B
RELEASE DATE:	12-JUN-00	SHEET 2 OF 2