REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	07-DEC-2011	MDW
B	PR1194	08-DEC-2011	MDW

ON REAR PANEL PCB ASSY 0091865000

ON DAMPING SWITCH BREAKAWAY.

TO REVERB PCBA

P/N 0049009000

OUTPUT TEST:
485mV SINE AT J4 (EFFECTS RETURN)
R104 EFFECTS RETURN LEVEL CONTROL AT FULL CW
50 WATTS RMS INTO 16 OHMS
WITH NO MORE THAN 5% THD

NOTES: (UNLESS OTHERWISE NOTED)

8. ALL VOLTAGES MEASURED WITH RESPECT TO GROUND USING A TRUE RMS DVM OF 1M ohms AC INPUT IMPEDANCE AND OF 10M ohms DC INPUT IMPEDANCE. VOLTAGES MAY VARY +/-20%. TEST CONDITIONS:
UNIT OPERATING AT RATED LINE VOLTAGE.
16 ohm RESISTIVE LOAD CONNECTED TO EITHER SPEAKER JACK.
IMPEDANCE SWITCH SET TO 16 ohms.
FOOTSWITCH CONNECTED AT FOOTSWITCH JACK J6.
ALL DC AND SUPPLY MEASUREMENTS MADE WITH NO INPUT SIGNAL.
REVERB OFF (OR REVERB CONTROL FULL CCW).
ALL OTHER CONTROLS AT 50% ROTATION.
CHANNEL ONE SELECTED (UNLESS NOTED OTHERWISE).
+/- (PAD) OFF (SWITCH NOT ILLUMINATED).
CHANNEL ONE PULL BRIGHT SWITCH IN (OFF).
CHANNEL ONE PULL BOOST SWITCH IN (OFF).
DAMPING SWITCH SET TO NORMAL.
BIAS SET TO 30mA PER OUTPUT TUBE. SEE NOTE 9.
7. TEN-DIGIT NUMBERS ARE FENDER PART NUMBERS.
6. THIS SCHEMATIC IS FOR PCB FABRICATION
0091764000 PCB FAB MAIN MACHETE
0091864000 PCB FAB REAR MACHETE
5. THIS SCHEMATIC IS FOR PCB ASSEMBLY
0091763000 PCB ASSY MAIN MACHETE
0091865000 PCB ASSY REAR MACHETE
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.

⚠10 HUM BALANCE ADJUSTMENT:
CHANNEL TWO SELECTED.
CHANNEL TWO GAIN FULL CCW.
CHANNEL TWO VOLUME AND LOW CONTROLS FULL CW.
CHANNEL TWO MID, HIGH, AND NOTCH CONTROLS AT 50% ROTATION.
REVERB OFF.
DAMPING SWITCH SET TO "NORMAL".
EFFECTS OFF.
ADJUST HUM BALANCE POT R201 FOR MINIMUM HUM AT SPEAKER.

15. TEST POINTS TP1-6 ARE FOR DEVELOPMENTAL PURPOSES ONLY.

14. TEST POINTS THIS PAGE: TP7-53 TP95-97

13. INSTANCES NOT USED: D37-44 J5 J7 J9 P18 P30 P32 Q21-22 R161-166 R246-247 R250-251 R256-275 R280-292 U11-12 U16 W31 W35 W37-8 W311 W313 W315 W319-20 W326-28 W330-33 W335-113

12. LAST INSTANCES: C157 D49 F2 J10 JMP3 K3 P34 Q24 R301 RT1 S5 SP2 TP100 U20 V8 W329

⚠11 EFFECTS LOOP TEST:
CONNECT J3 EFFECTS SEND JACK TO J4 EFFECTS RETURN JACK WITH A GUITAR CABLE.
SET EFFECTS R93 SEND AND R104 RETURN CONTROLS TO 50%.
NOTE SIGNAL VOLTAGE AT TP34.
TURN ON EFFECTS LOOP WITH FOOTSWITCH.
SIGNAL AT TP34 SHOULD NOT VARY BY MORE THAN 20% WHEN THE EFFECTS LOOP IS TURNED ON AND OFF.

⚠10 REVERB TEST:
REVERB TURNED ON (AT FOOTSWITCH).
REVERB CONTROL AT 50% ROTATION.
OBSERVE SIGNAL AT TEST POINT WITH AN OSCILLOSCOPE.
SIGNAL SHOULD BE SINUSOIDAL AND AMPLITUDE MODULATED AT ABOUT A 3Hz RATE.
VOLTAGES AT TEST POINTS ARE PEAK-TO-PEAK.

⚠9 BIAS ADJUSTMENT:
NO SIGNAL APPLIED, RATED LINE VOLTAGE AT T1 POWER TRANSFORMER PRIMARY:
SET BIAS ADJUST POT R198 TO OBTAIN A READING OF 60mV AT TP97 ACROSS R143.
VOLTAGE SHOWN AT TP85, WIPER OF R198, IS FOR REFERENCE ONLY.

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

CHECKED BY: _____
DATE: _____
APPROVED BY: _____
DATE: _____
DRAWN: M. WILKENS | ENGR: M. WILKENS
DATABASE FILE: Z1194S1.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
MACHETE
MAIN PCB ASSY

SIZE	DRAWING NUMBER	REV.
D	0091765000	B

RELEASE DATE: 07-DEC-2011 | SHEET: 1 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	07-DEC-2011	MDW
B	PR1194	08-DEC-2011	MDW

ON REAR PANEL PCB ASSY 0091865000

FOOTSWITCH OPERATION TEST:

CONNECT FOOTSWITCH (FENDER P/N 0091766000) TO J6 FOOTSWITCH JACK.
OPERATE THE FOOTSWITCH.

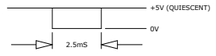
OBSERVE TEST POINT WITH OSCILLOSCOPE, 1x PROBE, DC-COUPLED INPUT, 0.5mS/DIV HORIZ, 2V/DIV VERT. CONNECT RETURN TO CHASSIS.

5V 1.6V 0V TP56

MIDI RECEIVE TEST:

INSTALL MIDI CABLE FROM MIDI CONTROLLER MIDI OUT TO J10 MIDI IN JACK.
USE THE MIDI CONTROLLER TO SEND MIDI COMMANDS.

OBSERVE TEST POINT WITH OSCILLOSCOPE, 1x PROBE, DC-COUPLED INPUT, 0.5mS/DIV HORIZ, 2V/DIV VERT. CONNECT RETURN TO CHASSIS.



+5V 0V TP54

CONDITION	TP55
NO FOOTSWITCH	+4.92V
FTSW PRESENT	0.0V

TABLE 3, TP55.

CONDITION	TP57
CH 1	0V (LED @ S5C OFF)
CH 1 BOOST	0V (LED @ S5C OFF)
CH 2	4.8V (LED @ S5C ON)

TABLE 1, TP57.

CONDITION	TP58
+/- (PAD) OFF	0V (LED @ S1C OFF)
+/- (PAD) ON	+4.8V (LED @ S1C ON)
MIDI PROG MODE, +/- (PAD) OFF	0V, 4.8V (LED @ S1C FLASHING)
MIDI PROG MODE, +/- (PAD) ON	0V, 4.8V (LED @ S1C FLASHING)

TABLE 2, TP58.

CONDITION	TP59
CH 1 GAIN BOOST OFF	0.0V
CH 1 GAIN BOOST ON	+4.95V
CH 2 SELECTED	0.0V

TABLE 4, TP59.

CONDITION	TP60
CH 1 GAIN BOOST OFF	-15.6V
CH 1 GAIN BOOST ON	+15.6V
CH 2 SELECTED	-15.6V

TABLE 5, TP60.

CONDITION	TP63
REVERB OFF	0.0V
REVERB ON	+4.95V
NO FTSW	+4.95V

TABLE 6,TP63.

CONDITION	TP64
REVERB OFF	-15.6V
REVERB ON	+15.6V
NO FTSW	+15.6V

TABLE 7, TP64.

CONDITION	TP65
EFFECTS OFF	0.0V
EFFECTS ON	+4.95V
NO PLUG IN J4 EFFECTS RETURN JACK	0.0V

CONDITION	TP66
EFFECTS OFF	-15.6V
EFFECTS ON	+15.6V
NO PLUG IN J4 EFFECTS RETURN JACK	-15.6V

CONDITION	TP67
NO PLUG IN J4 EFFECTS RETURN JACK	+0.6V
PLUG INSERTED INTO J4 EFFECTS RETURN JACK	0.0V

CONDITION	TP68
NO PLUG IN J4 EFFECTS RETURN JACK	<0.1V
PLUG INSERTED INTO J4 EFFECTS RETURN JACK	+4.95V

CONDITION	TP69
S5 OPEN	+0.6V
S5 CLOSED (PRESSED)	0.0V

CONDITION	TP70
S5 OPEN	<-0.1V
S5 CLOSED (PRESSED)	+4.95V

CONDITION	TP71
SWITCH @ R24 OPEN	+0.6V
SWITCH AT R24 CLOSED (PULLED)	0.0V

CONDITION	TP72
SWITCH @ R24 OPEN	<0.1V
SWITCH @ R24 CLOSED (PULLED)	+4.95V

CONDITION	TP73
S1 OPEN	+0.6V
S1 CLOSED (PRESSED)	0.0V

CONDITION	TP74
S1 OPEN	<0.1V
S1 CLOSED (PRESSED)	+4.95V

CONDITION	TP98
+/- (PAD) OFF	+4.95V
+/- (PAD) ON	+0.0V

CONDITION	TP99
+/- (PAD) OFF	+15.6V
+/- (PAD) ON	-15.6V

NOTES: (UNLESS OTHERWISE NOTED)

1. ALL RESISTORS IN OHMS, 5%; 1/4W.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
4. ALL DIODES ARE 1N4448.
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0091764000 AND 0091864000, AND PCB ASSEMBLY P/N 0091763000 AND 0091865000.
6. TEST POINTS THIS PAGE: TP1-6 TP54-74 TP98-99
7. TEST POINTS TP1-6 (IN THE VACINITY OF U18) ARE FOR DEVELOPMENTAL PURPOSES ONLY.

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

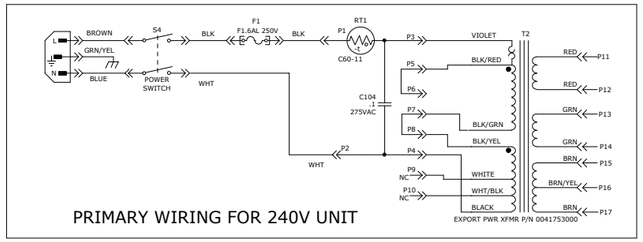
CHECKED BY: _____ DATE: _____
APPROVED BY: _____ DATE: _____
DRAWN: M. WILKENS ENGR: M. WILKENS
DATABASE FILE: Z1194S1.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
MACHETE
MAIN PCB ASSY

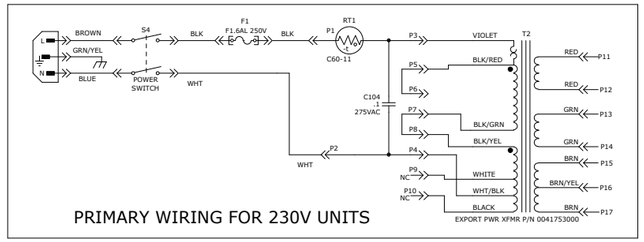
SIZE	DRAWING NUMBER	REV.
D	0091765000	B

RELEASE DATE: 07-DEC-2011 SHEET: 2 OF 5

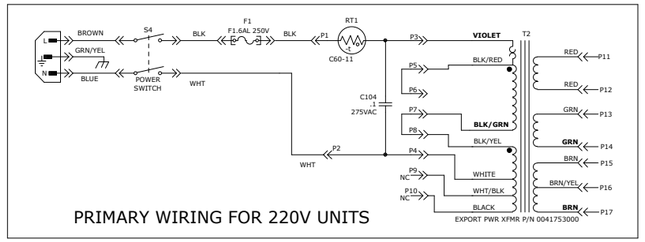
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	07-DEC-2011	MDW
B	PR1194	08-DEC-2011	MDW



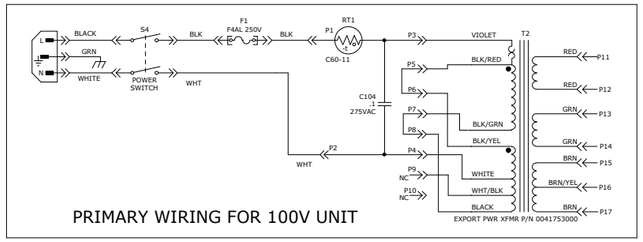
PRIMARY WIRING FOR 240V UNIT



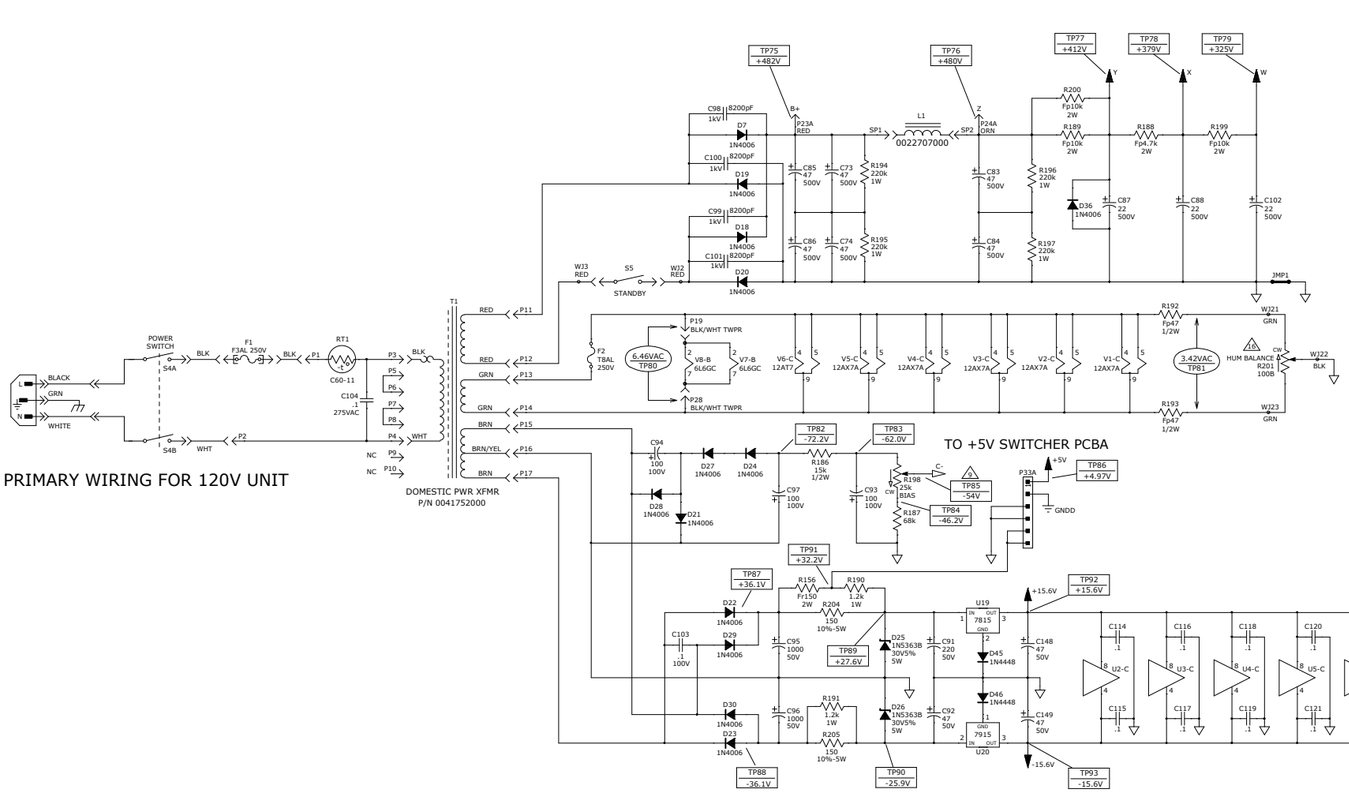
PRIMARY WIRING FOR 230V UNITS



PRIMARY WIRING FOR 220V UNITS



PRIMARY WIRING FOR 100V UNIT



7. TEST POINTS TP1-6 ARE FOR DEVELOPMENTAL PURPOSES ONLY.
6. TEST POINT THIS PAGE: TP75-94 TP100
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0091764000 AND 0091864000, AND PCB ASSEMBLY P/N 0091763000 AND 0091865000.
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)

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

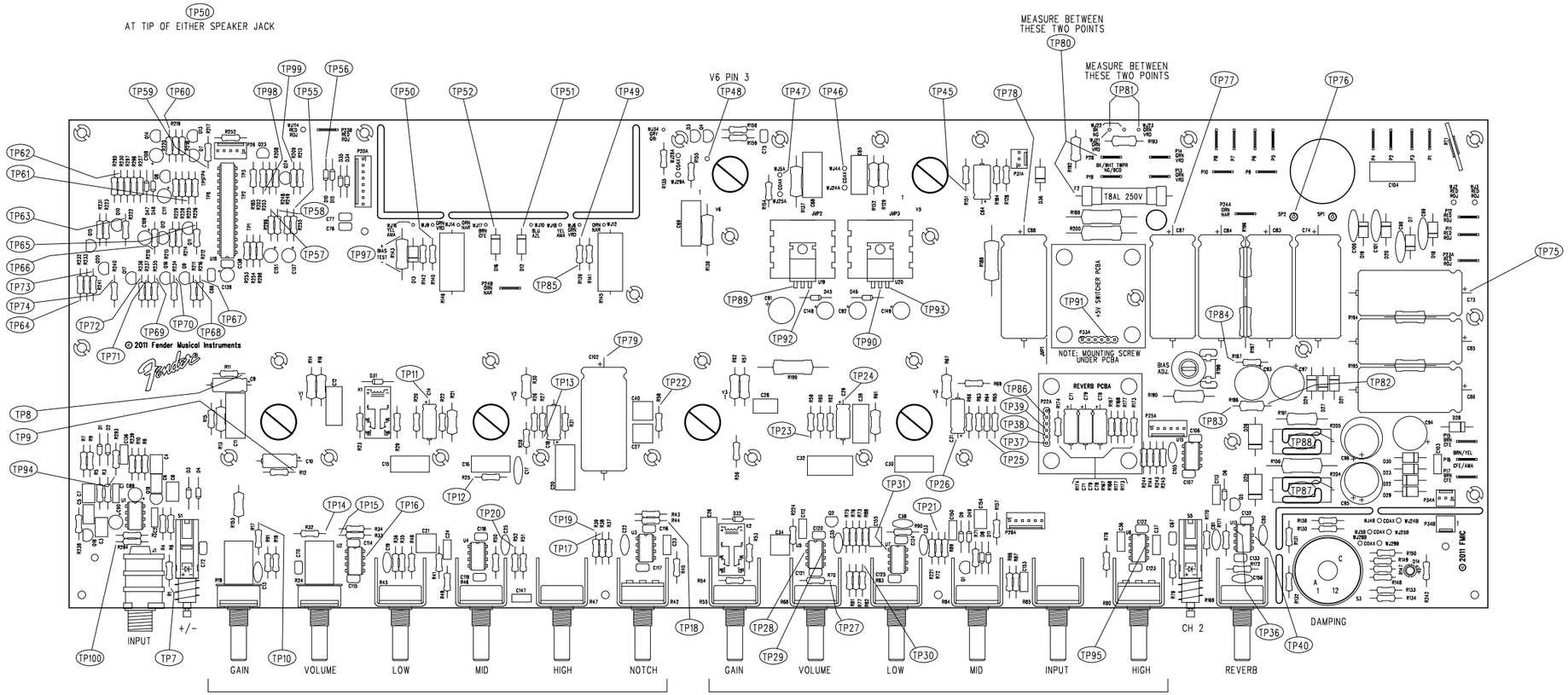
CHECKED BY: _____
DATE: _____
APPROVED BY: _____
DATE: _____
DRAWN: M. WILKENS | ENGR: M. WILKENS

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
MACHETE
MAIN PCB ASSY

SIZE D | DRAWING NUMBER 0091765000 | REV. B

DATABASE FILE: Z1194S1.SCH | RELEASE DATE: 07-DEC-2011 | SHEET: 3 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	04-NOV-11	MDW
B	PR1194	09-DEC-11	MDW



FILM/DWG:	SERVICE DIAGRAM
DATABASE: Z1194P1.PCB	DATE: 11-NOV-11

5. TEST POINTS TP1-6 (IN THE VACINITY OF U18) ARE FOR DEVELOPMENTAL PURPOSES ONLY.
4. TEST POINT ON THIS PAGE: TP1-31 TP36-40 TP45-53 TP55-TP95 TP97-100
3. WIRES NOT SHOWN FOR CLARITY.
2. PCB ASSEMBLY SHOWN AS FABRICATED BEFORE BREAK-AWAY PCBs ARE INSTALLED INTO THE CHASSIS.
1. SEE SHEETS 1-3 OF 5 FOR TEST CONDITIONS AND TEST POINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

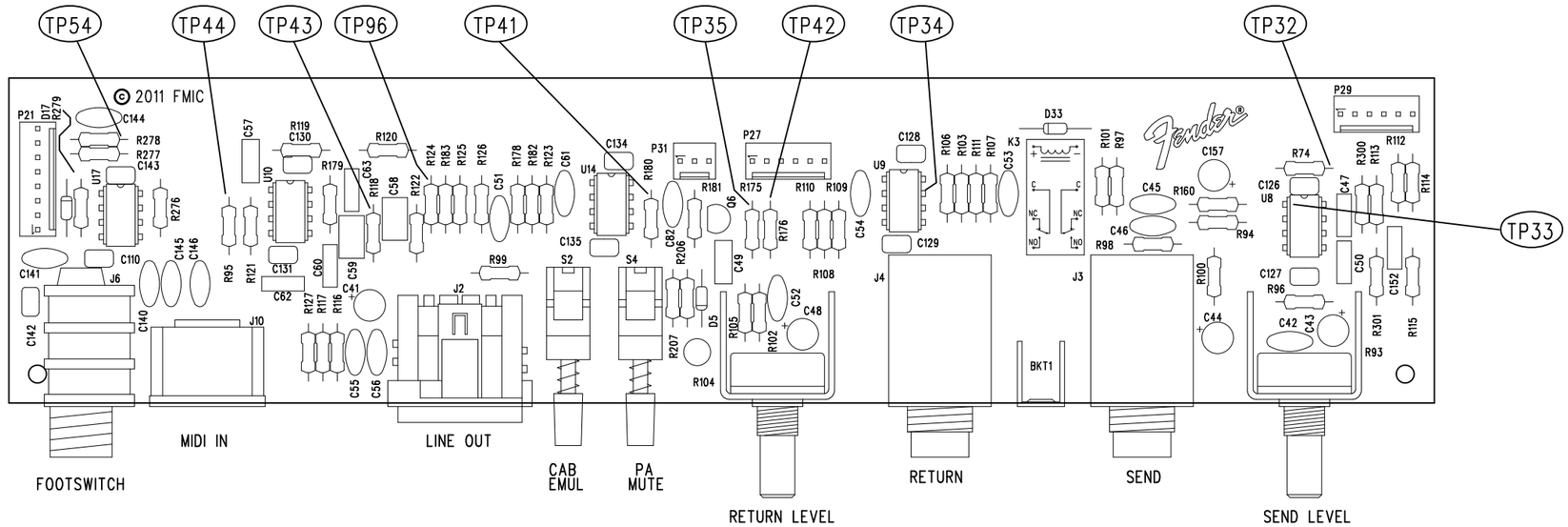
CHECKED BY: _____
DATE: _____
APPROVED BY: _____
DATE: _____
DRAWN: PK CORBIN | ENGR: M. WILKENS
DATABASE FILE: Z1194P1.PCB

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
MACHETE
MAIN PCB

SIZE	DRAWING NUMBER	REV.
D	0091765000	B

RELEASE DATE: 04-NOV-11 | SHEET 4 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	04-NOV-11	MDW
B	PR1194	09-DEC-11	MDW



FILM/DWG:	SERVICE DIAGRAM
DATABASE: Z1194P3.PCB	DATE: 04-NOV-11

3. TEST POINTS ON THIS PAGE: TP32-35 TP41-44 TP54 TP96
2. PCB SHOWN AS FABRICATED.
1. SEE SHEETS 1-3 OF 5 FOR TEST CONDITIONS AND TEST POINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)

CHECKED BY: _____
DATE: _____

APPROVED BY: _____
DATE: _____

DRAWN: CORBIN | ENGR: WILKENS

DATABASE FILE: Z1194P3.PCB

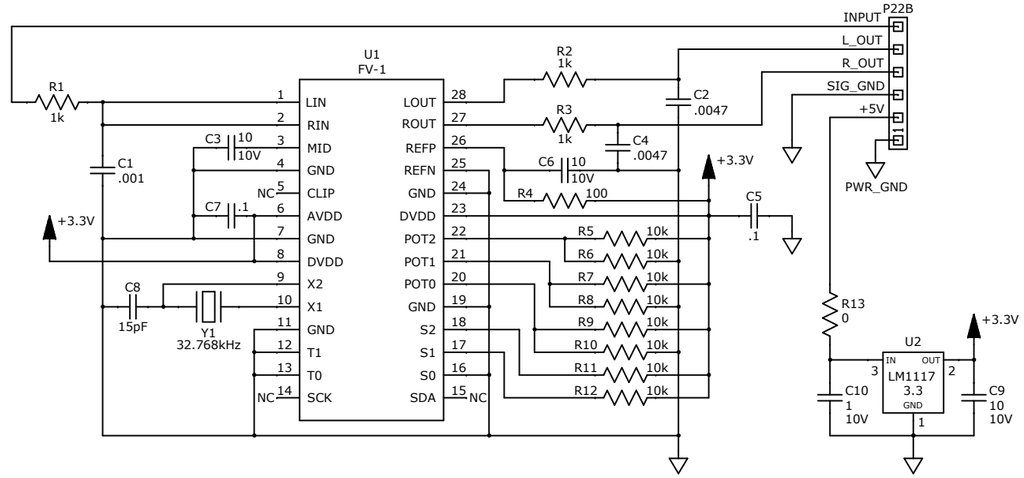
Fender® MUSICAL INSTRUMENTS
Corona, CA U.S.A.

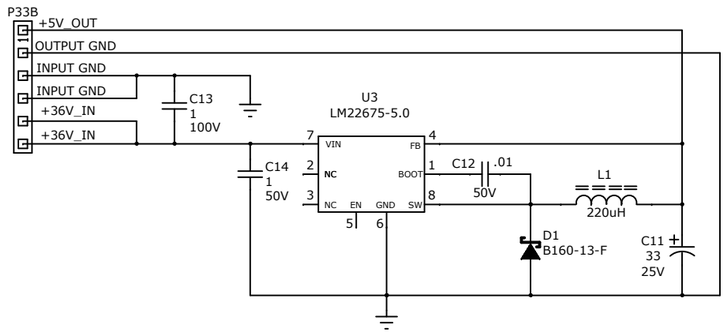
TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
MACHETE GUITAR AMP
REAR PANEL PCB

SIZE	DRAWING NUMBER	REV.
B	0091765000	B

RELEASE DATE: 04-NOV-11 | SHEET 5 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	17-OCT-11	MDW





5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0091774002 AND PCB ASSEMBLY P/N 0091774001.
4. ALL DIODES ARE 1N4448.
3. ALL POLARIZED CAPACITORS IN uF, 20%; 25V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 25V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5%; 1/8W.

NOTES: (UNLESS OTHERWISE NOTED)

CHECKED BY: _____
DATE: _____

APPROVED BY: _____
DATE: _____

DRAWN: HAN LE | ENGR: WILKENS

DATABASE FILE: Z1194S2.SCH

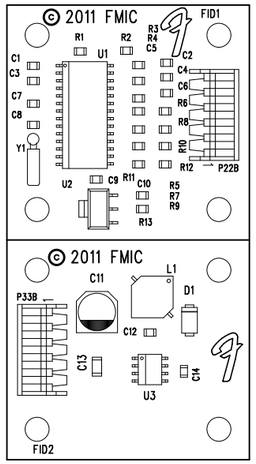
Fender®
MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
MACHETE
REVERB/+5V

SIZE	DRAWING NUMBER	REV.
B	0091774003	A

RELEASE DATE: 17-OCT-2011 | SHEET: 1 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR1194	05-JAN-12	MDW



FILM/DWG:	SERVICE DIAGRAM
DATABASE: Z1194P2.PCB	DATE: 17-OCT-11

1. SEE SHEET 1 FOR VALUES AND CONDITIONS.

NOTES: (UNLESS OTHERWISE NOTED)

CHECKED BY: _____

DATE: _____

APPROVED BY: _____

DATE: _____

DRAWN: Han Le | ENGR: Matt Wilkens

DATABASE FILE: Z1194P2.PCB

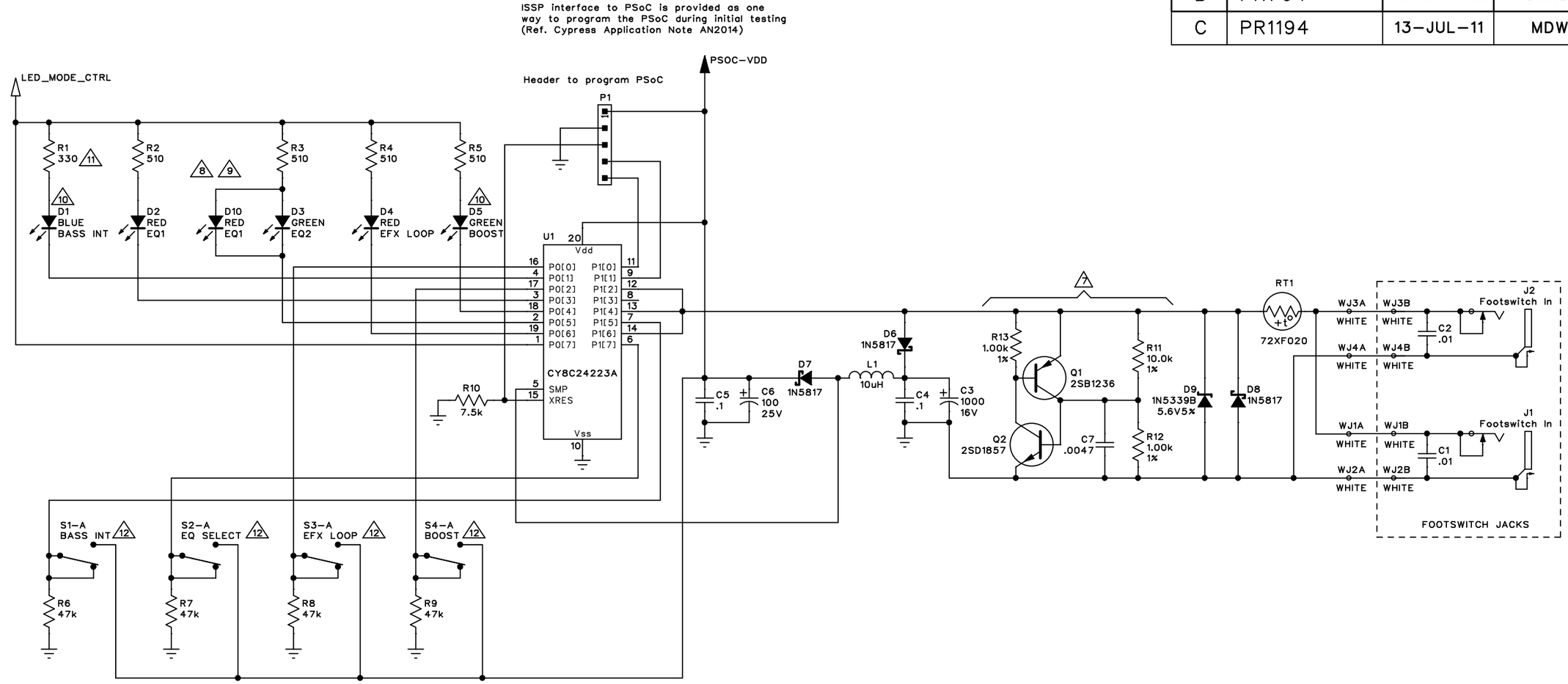
Fender® MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
MACHETE
REVERB/+5V PCBA

SIZE	DRAWING NUMBER	REV.
B	0091774003	A

RELEASE DATE: 05-JAN-12 | SHEET 2 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR705	12-OCT-06	R J D
B	PR704	30-JAN-08	S.M.B.
C	PR1194	13-JUL-11	MDW



SWITCH	ASSEMBLY PART NUMBER		
	0072474000	0075432000	0091767000
S1-A	BASS INT	BASS INT	CHANNEL SELECT
S2-A	EQ SELECT	EQ SELECT	CH1 GAIN BOOST
S3-A	EFX LOOP	EFX LOOP	EFFECTS LOOP
S4-A	BOOST	BOOST	REVERB

SWITCH FUNCTION CHART.

NOTES: (UNLESS OTHERWISE NOTED)

1. ALL RESISTORS IN OHMS, 5%; 1/4W.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
4. ALL DIODES ARE 1N4448.
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0072473000, AND PCB ASSEMBLIES P/N 0072474000 (SM-1500), 0075432000 (MARCUS MILLER PREAMP), AND P/N 0091767000 (MACHETE).
6. LAST REFERENCE DESIGNATORS: C7, D10, J2, P1, Q2, R13, RT1, S5, U1, WJ4.

△7 C7, Q1-2, R11-13 OMITTED.

△8 D10 OMITTED IN PCB ASSEMBLY 0072474000.

△9 D2-3 OMITTED IN PCB ASSEMBLIES 0075432000 AND 0091767000.

△10 D1 AND D5 ARE RED IN PCB ASSEMBLY 0091767000.

△11 R1 IS 510 ohms IN PCB ASSEMBLY 0091767000.

△12 SEE SWITCH FUNCTION CHART.

CHECKED BY: _____
DATE: _____

APPROVED BY: _____
DATE: _____

DRAWN: B. DESI | ENGR: B. DESI

DATABASE FILE: z705s5.SCH

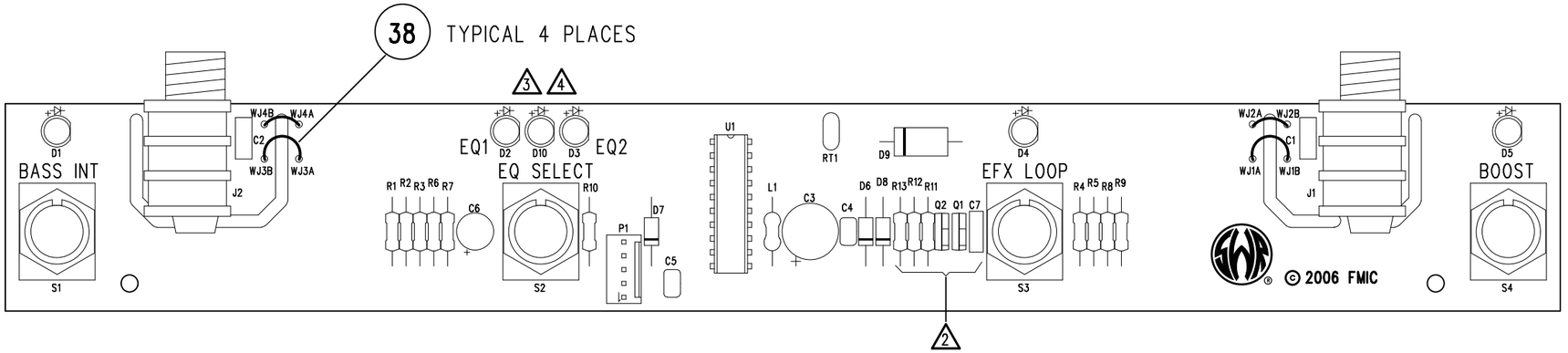
Fender® MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
SWR SM1500
FOOTSWITCH, 4-BUTTON

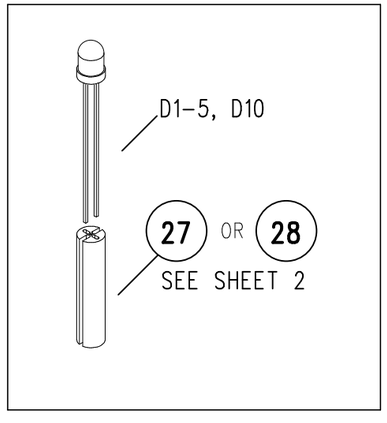
SIZE	DRAWING NUMBER	REV.
B	0072472000	C

RELEASE DATE: 12-OCT-06 | SHEET: 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR705	12-OCT-06	R J D
B	PR704	30-JAN-08	S.M.B.
C	PR1194	13-JUL-11	MDW



FILM/DWG:	PCB ASSEMBLY DRAWING
DATABASE: Z705P5.PCB	DATE: 30-JAN-08



4. ASSY 0075432000 (MARCUS MILLER) AND 0091767000 (MACHETE). DO NOT STUFF D2-3
3. ASSY 0072474000 (SM-1500): DO NOT STUFF D10
2. DO NOT STUFF C7, Q1-2, R11-13.
1. SEE A-SIZE SHEET 2 FOR BOM.

NOTES: (UNLESS OTHERWISE NOTED)

0091767000	PCB ASSY FTSW MACHETE
0075432000	PCB ASSY FTSW MARCUS MILLER PREAMP
0072474000	PCB ASSY FTSW SWR SM-1500
PART NUMBER	DESCRIPTION

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

CHECKED BY: _____
DATE: _____

APPROVED BY: _____
DATE: _____

DRAWN: B. Desi | ENGR: B. Desi

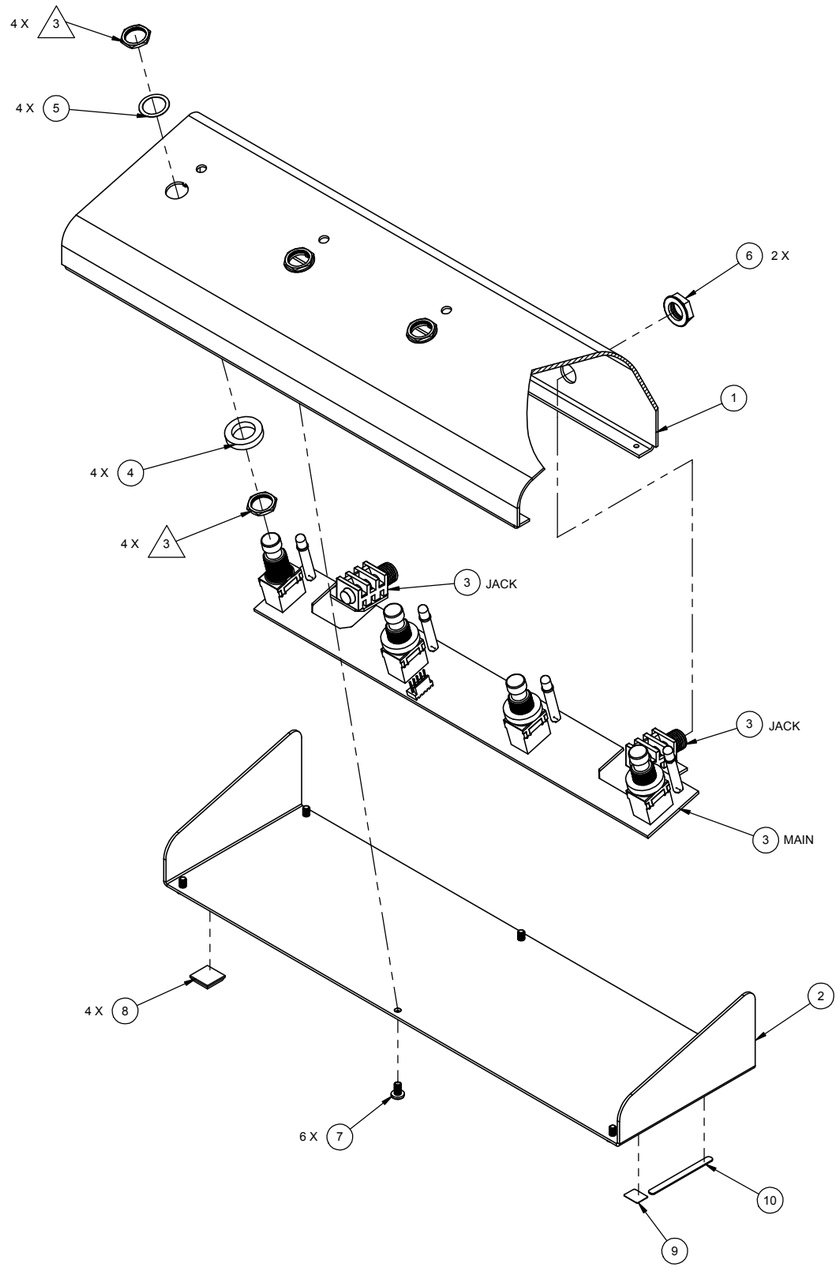
DATABASE FILE: Z705P5.PCB

TITLE: PCB ASSEMBLY, SWR FOOTSWITCH 4-BUTTON

SIZE	DRAWING NUMBER	MASTER DWG	REV.
B	0072474000		C

RELEASE DATE: 12-NOV-07 | SHEET 1 OF 2

REVISIONS			
REV	DESCRIPTION	BY	DATE
A	PR1194	SF	10/14/2011



ITEM	QTY	PART NO.	DESCRIPTION
4	11	1	0028895000	CABLE ASSY FTSW RT ANG 12' (N.S.)
	10	1	0039284000	LABEL MADE IN MEXICO
	9	1	0071293000	LABEL WEEE SYMBOL
	8	4	0065162000	PAD STANDOFF,RUBBER SMALL (BLACK)
	7	6	0032806000	SCRW TF 6-32x1/4 PHP BLX
	6	2	0055838000	NUT PLASTIC BLK REAN JACK
	5	4	0028501000	WSHR FLAT .477x.625 NI
	4	4	0031899000	WSHR NYL .485x.775x.150 TK
	3	1	0091767000	PCB ASSY FTSW MACHETE
	2	1	0072476000	BASE FOOTSWITCH 4 BTN
	1	1	0091769000	HOUSING FOOTSWITCH MACHETE

4. SHRINK WRAP ITEM 11 (CABLE) ON BACKSIDE OF FOOTSWITCH BETWEEN 1/4" JACKS.

3. HARDWARE INCLUDED WITH PART.

2. SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION. QTY 3 UNLESS OTHERWISE SPECIFIED.

1. ALL DIMENSIONS ARE IN INCHES.

NOTES: UNLESS OTHERWISE SPECIFIED.

ANY PART SUPPLIED FOR USE IN ANY FENDER PRODUCT MUST CONFORM TO THE EUROPEAN RoHS DIRECTIVE.

GENERAL TOLERANCES
UNLESS OTHERWISE SPECIFIED

	ENGLISH	METRIC
WOOD FRACT	±1/32	±1
X	± .050	±0.5
XX	± .020	±0.25
XXX	± .010	
HOLE DIA	+ .005 - .001	+0.13 -0.03
WOOD HOLE DIA	± .005	±0.13

ANGLES
ANGLES: ±0.5°
UNMARKED ANGLES: 90°

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

ENGINEER	M. WILKENS	DATE 06/21/2011
DRAWN	S. FENERTY	DATE 06/21/2011
CHKD		DATE
S.M.E. (OPT)		DATE
MGR/DIR		DATE
P.E.		DATE

FENDER MUSICAL INSTRUMENTS CORP.
RESEARCH AND DEVELOPMENT
CORONA, CALIFORNIA U.S.A.

TITLE

FTSW 4-BTN MACHETE

SIZE	PART NUMBER	REV
D	0091766000 ASSY	A

FILE NAME: 0091766000 | SCALE: NONE | SHEET: 1 of 1

TITLEBLOCK REVISION: 2.1