



BLUES DELUXE

p/n 022-4502-000 (120V)

SERVICE MANUAL



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BLUES DELUXE

(This is the model name for warranty claims)

SERVICE MANUAL

FEBRUARY 1994 REV A

IMPORTANT NOTICE:

The information contained herein is CONFIDENTIAL and PROPRIETARY to Fender Musical Instruments Corp. It is disclosed solely for use by qualified technicians for purposes of equipment maintenance and service. It is not to be disclosed to others without the expressed permission of Fender Musical Instruments Co. All specifications subject to change without notice.

For warranty repair service, only Fender specified part numbers are to be used. It is recommended they also be used for post-warranty maintenance and repair.

Parts marked with an asterisk (*) indicate the required use of that specific part. This is necessary for RELIABILITY and SAFETY requirements. **DO NOT USE A SUBSTITUTE!**

A coded naming convention is used in the description of certain parts. The codes and what they mean are as follows:

CAPACITOR CODES

CAP AE = Aluminum Electrolytic
CAP CA = Ceramic Axial
CAP CD = Ceramic Disk
CAP MPF = Metalized Polyester Film
CAP MY = Mylar
CAP PFF = Polyester Film/Foil

RESISTOR CODES

RES CC = Carbon Comp
RES CF = Carbon Film
RES FP = Flame Proof
RES MF = Metal Film
RES WW = Wire Wound

HARDWARE CODES

BLX = Black Oxide
CR = Chrome Plated
HWH = Hex Washer Head
M = Machine Screw
NI = Nickel Plated
OHP = Oval Head Phillips
PB = Particle Board
PHP = Pan Head Phillips
PHPS = Pan Head Phillips Sems
SMA = Sheet Metal "A" Point
SMB = Sheet Metal "B" Point
SS = Stainless Steel
TF = Thread Forming
ZI = Zinc Plated

BLUES DELUXE PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047022	PCB ASSY BLUES DELUXE	(STUFFED)
2	028104	BUTTON PUSH SWITCH BLACK	(@S1,2)
1	025722	CABLE ASSY REVERB 1100MM	(@P1-4)
3	038856	CABLE JUMPER 6 CKT .1X4.0	(@P5-11)
2	038689	CAP AE AX .47uF 100V	C11,19
2	038692	CAP AE AX 10uF 35V	R30,31
4	009512	CAP AE AX 22uF 25V 20%	R1,8,13,16
2	024819	CA[AE AX 22uF 500V	C45,46
3	036954	CA[AE RD; 22uF 63V 20%	C40
4	028953	CAP AE AX 100uF 350V+50%-10%	R34,35,41,42
3	031040	CAP AE RDL 100uF 100V 20%	C37-39
2	028494	CAP AE RDL 1000uF 35V 20%	C43,44
1	020909	CAP CD 47PF 1000V 10%	C12
1	020917	CAP CD 250PF 1000V 10%	C5
2	039261	CAP CA 330PF 100V	C15,18
1	038874	CAP CA 560PF 50V	C20
2	025951	CAP CD 750PF 1000V 10%	C3,4
1	039264	CAP CA 1500PF 100V	C50
1	033580	CAP PFF RDL .0022uF 100V 10%	C17
1	033583	CAP PFF RDL .0047uF	C49
1	024823	CAP MPF RDL .01uF 400V 10%	C2
1	036234	CAP PFF RDL .015uF 100V 10%	C21
3	024833	CAP MPF RDL .022uF 400V 10%	C7,9,23
1	033591	CAP PFF RDL .033uF 100V 10%	C28
1	024839	CAP MPF .033uF 400V	C14
1	027272	CAP MPF .047uF 63V	C10
1	033592	CAP PFF RDL .047uF 100V 10%	C32
2	024853	CAP MPF RDL .1uF 250V 10%	C22,24
1	024854	CAP MPF RDL .1uF 400V 10%	C6
2	024855	CAP MPF RDL .1uF 630V 10%	C25,26
1	027286	CAP MPF .47uF 63V	C27
1	041510	CONTROL SNAPIN 25K B	R14
1	047031	CONTROL SNAPIN 25K 30C TAPER	R42
1	037600	CONTROL SNAPIN 100K B	R38
2	047540	CONTROL SNAPIN 250K 15A	R7,17
1	037597	CONTROL SNAPIN 250K 30A	R12
2	041507	CONTROL SNAPIN 1M 10A	R13,21
8	006260	DIODE 1N4448/1N914B SIGNAL	CR1,5,6,7,9,10,11,12,13
4	026730	DIODE 1N4006/1N5062 800PRV 1A	CR14-17
3	064089	DIODE 1N4003	CR19-21
2	029690	DIODE HV 3KV 200MA	CR24,25
2	028119	DIODE ZEN 1N5353V 16V 5W	CR22,23
2	031019	DIODE ZEN 1N5245B 15V .5W 5%	CR2,3
23	025802	FSTN TB MALE .250X.032 PCBMT	CP1-23
2	016795	IC DUAL OP AMP TL072	U1,2
2	031611	IC DUAL OP AMP PC4560	U3,4
1	031570	JACK PHONE PCB STEREO PREMIUM	J3
4	037036	JACK PHONE PCB MONOCA PREMIUM	J1,2,4,5
43	020888	JUMPER WIRE 22GA.5X.175	Q1-43
6	026043	JUMPER WIRE 18GA.8X.175	JP1-3, 5-7
1	028039	LED RED 5X5MM SLB-55VR3	LD1
1	047006	PCB FAB BLUES DLX/DVL	(RAW BOARD)
2	031901	PIN MALE PCB .093	SP1,2
2	036613	RELAY DPDT DIP 24 VOLT 8.3mA	RY1,2
1	025818	RES CF 1/4W 5% 4.7Ω	R92
1	024947	RES CF 1/4W 5% 47Ω	R31
1	024961	RES CF 1/4W 5% 470Ω	R49
2	024962	RES CF 1/4W 5% 560Ω	R72,74
1	024965	RES CF 1/4W 5% 1K	R61
10	024969	RES CF 1/4W 5% 1.5K	R5,10,19,28,36,39,41,55,56

BLUES DELUXE
PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	024973	RES CF 1/4W 5% 3.3K	R84
3	024977	RES CF 1/4W 5% 4.7K	R32,43,96
1	024979	RES CF 1/4W 5% 6.8K	R16
1	026510	RES CF 1/4W 5% 9.1K	R50
8	024981	RES CF 1/4W 5% 10K	R34,60,62,65,68,71,77,78
1	024987	RES CF 1/4W 5% 22K	R25
1	024988	RES CF 1/4W 5% 27K	R87
1	024993	RES CF 1/4W 5% 47K	R23
3	024995	RES CF 1/4W 5% 68K	R1,2,93
3	024997	RES CF 1/4W 5% 100K	R6,11,27
6	025059	RES CF 1/4W 5% 220K	R15,24,29,35,53,54
2	025061	RES CF 1/4W 5% 330K	R20,26
2	025065	RES CF 1/4W 5% 470K	R33,40
1	028018	RES CF 1/4W 5% 510K	R8
11	025069	RES CF 1/4W 5% 1M	R3,22,30,47,48,63,69,70,76,79,95
2	025075	RES CF 1/4W 5% 2.2M	R37,94
2	041741*	RES MOX FP 1/2W 47Ω	R80,81
4	025116	RES CF 1/2W 5% 100K	R4,9,18,52
4	025117	RES CF 1/4W 5% 220K	R82,83,88,89
1	028861	RES CF 1/4W 5% 3.3K	R75
1	031065	RES CF 1/4W 5% 91K	R51
2	036468*	RES MOX FP 1W 5% 470Ω	R57,58
1	027346	RES FILM 1W 5%1.2K	R59
1	036621	RES FILM 1W 5% 6.8K	R46
1	041739*	RES MOX FP 1W 5% 6.8K	R90
1	036470*	RES MOX FP 1W 5% 10K	R91
2	028037	RES WW BT 5W 10% 330Ω	R85,86
4	014999	SCRW M 6-32X1/4 PHP BLX	(8 PIN TUBE SOCKET MOUNT)
10	039367	SCRW 6-32X3/8 PHPS SS	(PCB TO STANDOFF MOUNT)
3	029167	SOCKET TUBE 9 PIN PCB MOUNT	(V1-3)
2	029343	SOCKET TUBE 8 PIN PCB MOUNT	(@V4-5)
1	027337	SPACER LED .76X.1 RED	(@LD1)
10	016440	STNDOFF RND AL 6-32X1X1/4	(PCB TO CHASSIS MOUNT)
2	028091	SWITCH [ISJ S;F;L SJPRTSTRPLE	S1,2
1	028503*	THERMISTOR 10 Ω 5A C60-11	TH1
1	014689	XSTR N-CH JFET J111 TO-92	Q1

CHASSIS ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047412	CHS ASSY 120V BLUES DELUXE	
1	026038	BUSHING SR .625X.062X37/64 B;L	(@ PWR CABLE 100/120/240 AUST.)
1	010401	BUSHING SR .625X.125X37/64 WHT	(@ PWR CABLE 230/240V U.K.)
1	026116	BUSHING SR .500X.063X7/16 BLK	(@ REVERB CABLE)
2	0028069	BUSHING SNAP 3/4X1-1/8 WHT	(@ OUTPUT XFMR WIRES)
1	018022	BUSHING SNAP 5/16X17/32 BLK	(@ L1 INDUCTOR WIRES)
1	026541	CABLE ASSY PWR W/.250 TAB 120V	(100/120V ONLY)
1	033331	CABLE ASSY PWR 220/240V	(230V EXPORT ONLY)
1	038602	CABLE ASSY PWR AUST .250 TAB	(240V AUST ONLY)
1	040993	CABLE ASSY PWR 5A U.K. .250 TAB	(240 V UK ONLY)
1	022707	CHOKE FILTER	L1
1	047017	CHS BLUES DELUXE	(RAW CHASSIS STEEL ONLY)
2	031091	CLAMP TUBE (277H-1)	(OUTPUT TUBE MOUNT)
1	032219	COLLAR PILOT LIGHT	
1	036702	FUSEHOLDER 3AG FINGER GRIP	XF1 (100/120V ONLY)
1	036703	FUSEHOLDER 5MM FINGER GRIP	XF1 (230/240V EXPORT ONLY)
1	077982	FUSE QA 1-1/4X1/4 250V 3AMP	F1 (100/120V ONLY)
1	020793	FUSE QA 20mmX5mm 250V 1.6AMP	F1 (230/240V EXPORT ONLY)
1	021741	HOLDER DIAL LITE ASSY PILOT	(SOCKET)
1	021550	JACK PHONE TIP SHUNT 12A	J6 (SPEAKER MOUNT)
1	025718	JEWEL #20 PILOT LITE	(@ POWER INDICATOR)
8	036620	KNOB POINTED 1/4" SHAFT	

BLUES DELUXE CHASSIS ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	016352	NUT HEX 3/8-32X3/32 TL MO	(@ J6 SPEAKER OUTPUT JACK)
1	031625	NUT HOLDER PILOT LIGHT 1/16-27	
6	022004	NUT KEPS #8-32 ZINC	(POWER/OUTPUT XFORMER MNT)
1	041955	PANEL TOP CHROME BLUES DLX/DVL	
1	021642	PILOT LIGHT #T47	
12	014999	SCRW , 6-32X1/4 PHP BLX	(PCB TO CHASSIS MOUNT)
2	016473	SCRW M 8-32X1/2 PHP ZI	(OUTPUT TRANSFORMER MOUNT)
4	038900	SCRW TF 6-32X1/4 PHP ZI	(GND LUG & INDUCTOR MOUNT)
1	036570	SWITCH TOGGLE DPST W/NUTS	S3 (POWER SWITCH)
1	037039	SWITCH TOGGLE SPST W/NUTS	S4 (STANDBY SWITCH)
2	039214	TUBE 5881/6L6WGC	V4,5
3	013341	TUBE VACUUM 7025/12AX7	V1,2,3
.167	012398	TUBING SHRINK 3/16 BLACK	
.7	9904300920	WSHR FLAT .482X.709 NI	(@ FRONT PNL JACKS, SWITCHES)
1	9904300100	WSHR LCK INTL 3/8X.681X.032 AI	(@ J6 SPEAKER OUTPUT JACK)
1	047269	XFMR OUTPUT BLUES DELUXE	T1
1	036958	XFMR POWER DOMESTIC VV	T2 (120V DOMESTIC ONLY)
1	047395	XFMR POWER EXPORT BLUES DLX	T2 (100/115/230/240V ONLY)

CABINET ASSEMBLY

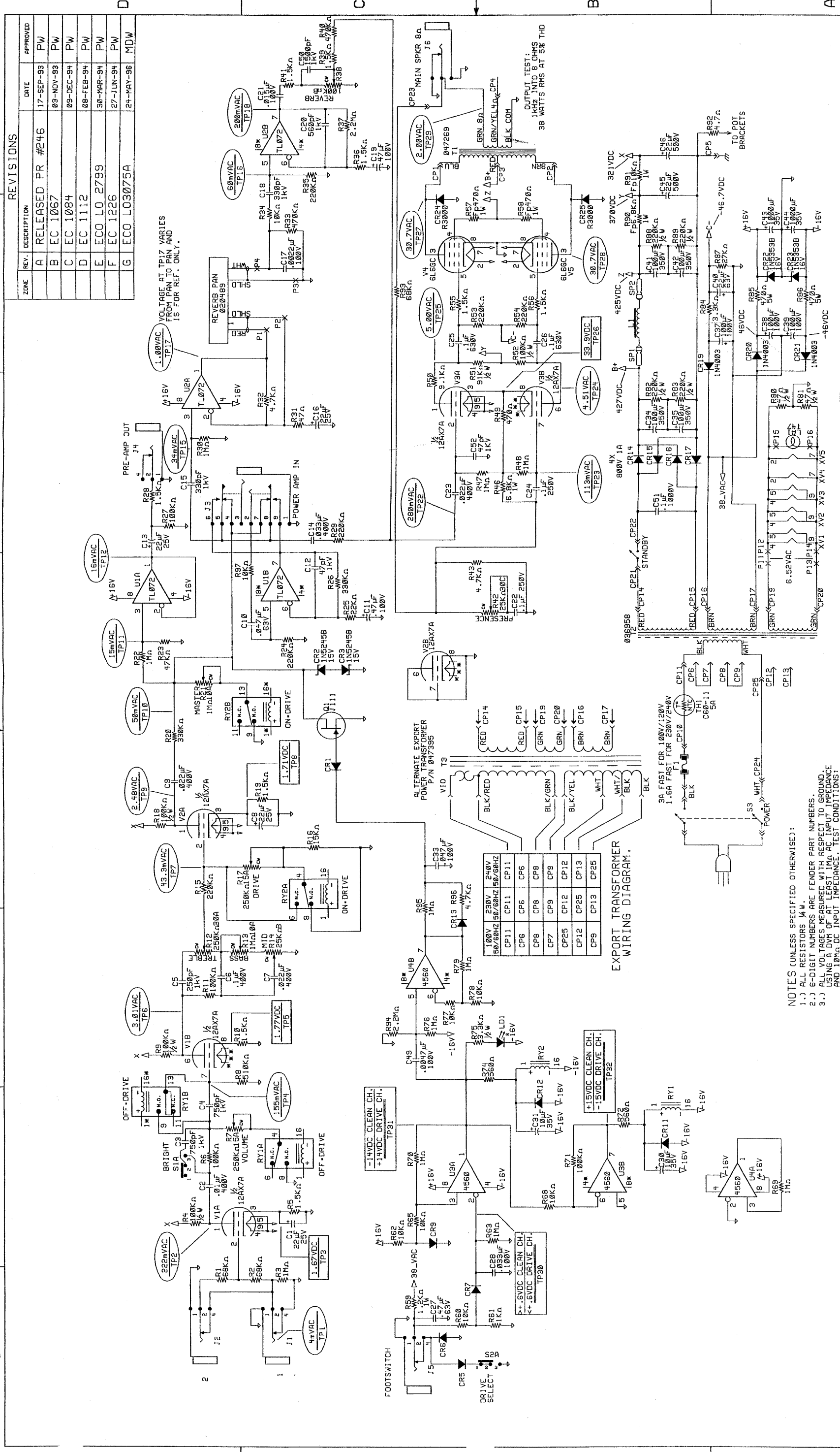
QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	041989	CAB ASSY BLUES DELUXE	
1	041977	BACK ASSY UPPER BLUES DLX/DVL	
1	031849	BAG REVERB SPRING UNIT	(BAG ONLY)
1	038566	CABLE ASSY SPKR RT ANG 13-1/2"	(SPEAKER CABLE)
1	012582	CLAMP CABLE NYL SCRW MNT 1/4	(@ REVERB CABLE)
4	024653	GLIDE CABINET NICKEL PLATED	
1	041998	GRILLE BAFFLE ASSY BLUES DELUXE	(COMPLETE GRILLE)
1	036784	HANDLE MOLDED BROWN	
4	022483	INSERT GLIDE CUSHION	(RUBBER ONLY)
1	041929	NAMEPLATE "FENDER" TWEED AMPS	(LOGO)
6	069393	NUT 6-32 HEX EXT LCOK	
4	021972	NUT T 10-32X3/4 STR 3-PRNG BLX	(SPEAKER MOUNT)
4	064162	NUT T 8-32X1/2 STR 3 PRNG BLX	(HANDLE MOUNT)
1	028453	PAD CARBOARD REVERB	
1	047018	PANEL REAR CHROME BLUES DELUXE	
.001	036650	PIN ESCUTCHEON #18X3/8 NI	(NAMEPLATE MOUNT)
1	020489	REVERB UNIT 4 SPRING 4BB3C1B	(PAN ONLY)
6	036618	SCRW M 6-32X1-1/2 OHP BRONZE	(GRILLE MOUNT)
4	037247	SCRW M 8-32X1 OHP NI	(HANDLE MOUNT)
6	015990	SCRW M 10-32X3/4 THP NI	(BACK ASSY MOUNT)
4	036619	SCRW M 10-32X1-1/2 THP NI	(CHASSIS MOUNT)
4	043331	SCRW M 10-32X5/8 HWHS BLX	(SPEAKER MOUNT)
3	029828	SCRW PB 8X3/4 PHP ZI	
4	026625	SCRW WOOD 8X1 FH	(GLIDE MOUNT)
1	037617	SPEAKER 12" 8 OHM 50 WATTS	
2	026459	WSHR FLAT 6X3/8 ZI	

FOOTSWITCH ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	028890	FTSW ASSY 1 BTTN F/LOGO	(COMPLETE FOOTSWITCH)
1	006260	DIODE 1N4448/1N914B SIGNAL	CF1
1	037036	JACK PHONE PCB MONO CA PREMIUM	J1
1	028039	LED RED 5X5MM SLB-55VR3	LD1
1	028714	SWITCH PUSH SPDT	S1

MISCELLANEOUS

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047013	MANUAL OWNERS BLUES DELUXE	
1	047020	SCHEM REDU W/ SER DIAG BLUES DLX	



REVISIONS		DATE	APPROVED
A	RELEASED PR #246	17-SEP-93	PW
B	EC 1067	03-NOV-93	PW
C	EC 1084	09-DEC-94	PW
D	EC 1112	08-FEB-94	PW
E	ECO LO 2799	30-MAR-94	PW
F	EC 1226	27-JUN-94	PW
G	ECO L03075A	24-MAY-96	MDW

VOLTAGE AT TP17 VARIES FROM PAN TO PAN AND IS FOR REF. ONLY.

REVERSE PAN 020489

PRE-AMP OUT

POWER AMP IN

MASTER

ON-DRIVE

OFF-DRIVE

BRIGHT

VOLUME

OFF-DRIVE

FOOTSWITCH

DRIVE SELECT

EXPORT TRANSFORMER WIRING DIAGRAM.

100V	230V	240V
50/50Hz	50/60Hz	50/70Hz
50/80Hz		
CP11	CP6	CP8
CP7	CP9	CP12
CP25	CP12	CP13
CP9	CP13	CP25

3A FAST FOR 100V/120V
1.6A FAST FOR 230V/240V

NOTES (UNLESS SPECIFIED OTHERWISE):

- 1.) ALL RESISTORS 1/4 W.
- 2.) 6-DIGIT NUMBERS ARE FENDER PART NUMBERS.
- 3.) ALL VOLTAGES MEASURED WITH RESPECT TO GROUND. USING A DVM OF AT LEAST 1MΩ AC INPUT IMPEDANCE AND 10MΩ DC INPUT IMPEDANCE. TEST CONDITIONS: LINE VOLTAGE 120VAC 60HZ. FOOTSWITCH CONNECTED. DRIVE CH. SEL., BRIGHT SW. OFF. ALL CONTROLS 50% ROT., EXCEPT REVERSE 0%. SUPPLY AND BIAS VOLTAGES MAY VARY +5%, -10%. SIGNAL VOLTAGES MAY VARY ±20%.
- 4.) X WITH INSTANCE NAME - FLYWIRE CONNECTION.
- 5.) LAST INSTANCES: RY2.LD1,U4,Q1,TH1,R97,C52,C25,T2,I3,CP25, R44,45,64,66,67,73, TP13,14,19,20,21,33,34.
- 6.) LAST INSTANCES NOT USED: RY2.LD1,U4,Q1,TH1,R97,C52,C25,T2,I3,CP25, R44,45,64,66,67,73, TP13,14,19,20,21,33,34.
- 7.) ALL DIODES 1N4448.

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DATABASE FILE: Z246S.DBF
CHECKED BY: *[Signature]*
DATE: 5/21/96
APPROVED: *[Signature]*

TOLERANCES: UNLESS OTHERWISE SPECIFIED:
X.X .050"
X.XX .010"
X.XXX .005"
ANGLES

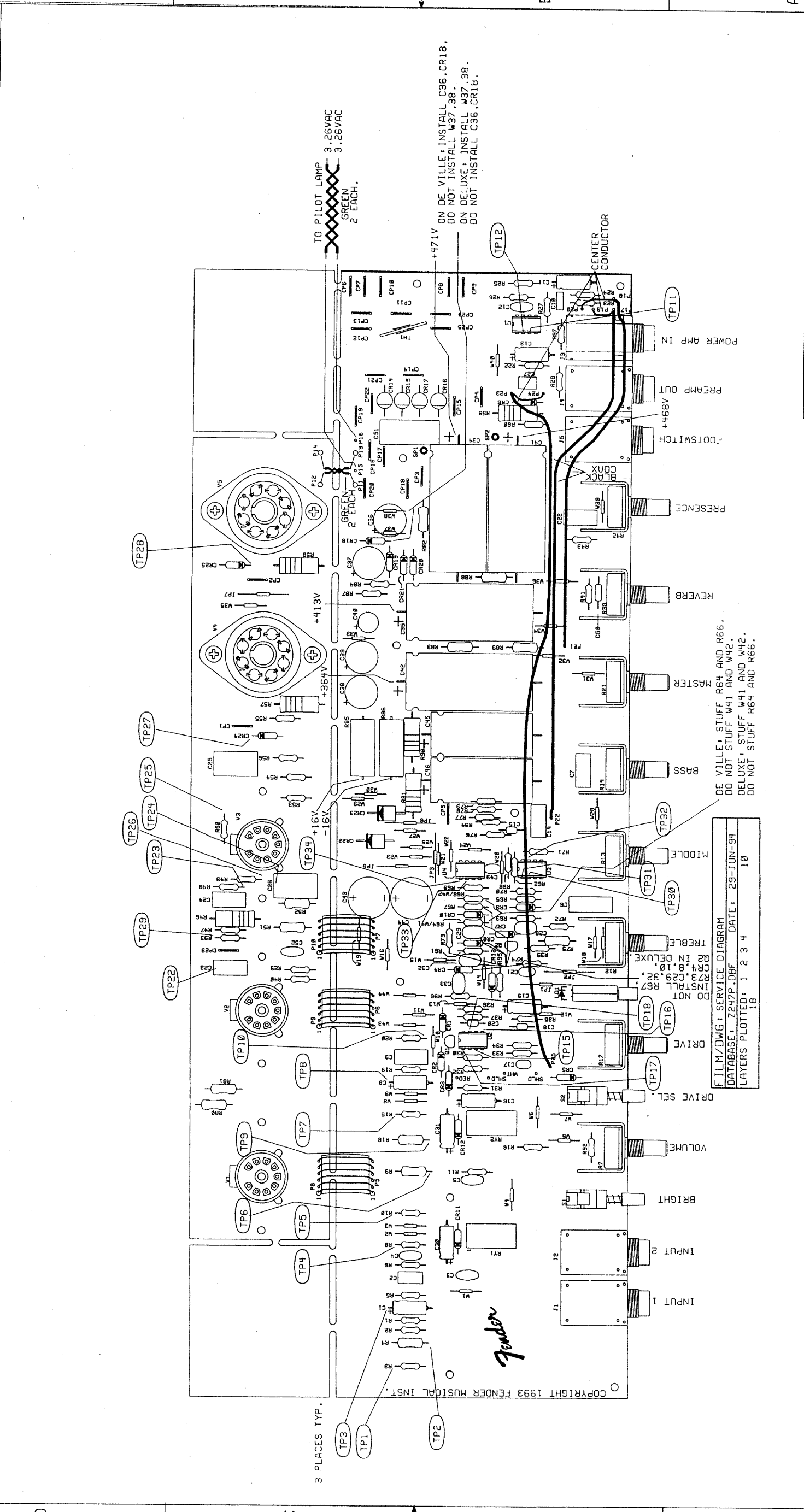
TITLE: BLUES DELUXE SCHEMATIC DIAGRAM
DRAWN: P. WIERS
DATE: 07/01/93
ENGR: P. WIERS
SCALE: 1 OF 1

MUSICAL INSTRUMENTS
1130 Columbia Street
Brea, CA 92621

BLUES DELUXE
NEXT HIGHER ASSEMBLY:
CREATED: 23-SEP-93
PLOT: 21-MAY-96 SHEET 1 OF 1

REVISIONS			
ZONE	REV. DESCRIPTION	DATE	APPROVED
A	RELEASED PR247	17-SEP-93	PW
B	ECO L02799	09-MAR-94	PW
C	EC 1226	27-JUN-94	

1 2 3 4 5 6 7 8



DATABASE FILE		PROPRIETARY	
FILE: Z247P.DBF	THIS DRAWING DOCUMENT CONTAINS TRADE SECRET INFORMATION AND IS THE PROPERTY OF FENDER GUITAR CORPORATION. IT IS TO BE KEPT CONFIDENTIAL AND NOT TO BE DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF FENDER GUITAR CORPORATION.	FENDER MUSICAL INSTRUMENTS CO.	1130 Columbia Street Berkeley, CA 94707
CHECKED BY: [Signature]	DATE: 29-JUN-94	TITLE: SERVICE DIAGRAM	BLUES DE VILLE/DELUXE
APPROVED: [Signature]	DATE: 29-JUN-94	SIZE: [Blank]	DRAWING NUMBER: 047005
TOLERANCES: UNLESS OTHERWISE SPECIFIED	RESISTORS: 1% 1/4W	ENGR: WIERS	REV: C
X.X: 1/16"	1/32"	CREATED: 03-NOV-93	SCALE: 1 OF 1
X.XX: .001"	0.005"	PLOTTED: 29-JUN-94	
X.XXX: .0001"	0.0005"		
ANGLES: AS SHOWN			

NOTE:
 1) TEST POINTS TP33,34 NOT APPLICABLE ON DELUXE.
 2) PCB SHOWN AS FABRICATED.

FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z247P.DBF DATE: 29-JUN-94
 LAYERS PLOTTED: 1 2 3 4 10

DE VILLE: STUFF R64 AND R66.
 DO NOT STUFF W41 AND W42.
 DELUXE: STUFF W41 AND W42.
 DO NOT STUFF R64 AND R66.

3 PLACES TYP.

TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP15 TP16 TP17 TP18 TP19 TP20 TP21 TP22 TP23 TP24 TP25 TP26 TP27 TP28 TP29 TP30 TP31 TP32 TP33 TP34

TO PILOT LAMP 3.26VAC GREEN 2 EACH.

ON DE VILLE: INSTALL C36, CR18.
 DO NOT INSTALL W37, 38.
 ON DELUXE: INSTALL W37, 38.
 DO NOT INSTALL C36, CR16.

POWER AMP IN
 PREAMP OUT
 +468V
 FOOTSWITCH
 PRESENCE
 REVERB
 MASTER
 BASS
 MIDDLE
 TREBLE
 DRIVE
 VOLUME
 BRIGHT
 INPUT 2
 INPUT 1

3.26VAC GREEN 2 EACH.

TO PILOT LAMP 3.26VAC GREEN 2 EACH.

ON DE VILLE: INSTALL C36, CR18.
 DO NOT INSTALL W37, 38.
 ON DELUXE: INSTALL W37, 38.
 DO NOT INSTALL C36, CR16.

DE VILLE: STUFF R64 AND R66.
 DO NOT STUFF W41 AND W42.
 DELUXE: STUFF W41 AND W42.
 DO NOT STUFF R64 AND R66.

FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z247P.DBF DATE: 29-JUN-94
 LAYERS PLOTTED: 1 2 3 4 10

NOTE:
 1) TEST POINTS TP33,34 NOT APPLICABLE ON DELUXE.
 2) PCB SHOWN AS FABRICATED.

1 2 3 4 5 6 7 8