

# REISSUE '65 DELUXE REVERB

## SERVICE MANUAL



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# Reissue '65 Deluxe Reverb

(This is the model name for warranty claims)

## SERVICE MANUAL

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### 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

# Reissue '65 Deluxe Reverb

## PARTS LIST

### PRINTED CIRCUIT BOARD ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	041289	PCB ASSY '65 DELUXE REVERB 120V	(STUFFED)
3	037805	CABLE RIBBON 6 CKT 2-1/4"	P21,22,23
1	038691	CAP AE AX 4.7uF 50V 20%	C19
7	009512	CAP AE AX 22uF 25V 20%	C1,6,11,15,16,23,24
3	024819	CAP AE AX 22uF 500V 20%	C33,34,35
1	041589	CAP AE AX 47uF 500V 20%	C32
1	036954	CAP AE RDL 22uF 63V 20%	C29
1	031040	CAP AE RDL 100uF 100V 20%	C36
1	041705	CAP AE RDL 220uF 100V 20%	C31
1	020883	CAP CD 10PF 1000V 10%	C13
1	020909	CAP CD 47PF 1000V 10%	C10
2	020917	CAP CD 250PF 1000V 10%	C2,7
1	020842	CAP CD 500PF 1000V 10%	C14
2	024823	CAP MPF RDL .01uF 400V 10%	C20,21
2	024833	CAP MPF RDL .022uF 400V 10%	C12,22
3	024845	CAP MPF RDL .047uF 400V 10%	C4,5,9
1	024853	CPA MPF RDL .1uF 250V 10%	C26
3	024854	CAP MPF RDL .1uF 400V 10%	C3,8,18
2	024855	CAP MPF RDL .1uF 630V 10%	C27,28
1	037040	CAP PFF .0033uF 400V 10%	C17
1	037666	CAP PFF .001uF 400V 10%	C25
2	037596	CONTROL SNAPIN 1 MEG 30A J TAPER	R10,22
2	037597	CONTROL SNAPIN 250K 30A J TAPER	R7,19
2	037599	CONTROL SNAPIN 250K 10A AUDIO	R8,20
1	037600	CONTROL SNAPIN 100K B	R31
1	037601	CONTROL SNAPIN 3 MEG 10C AUDIO	R42
1	037602	CONTROL SNAPIN 50K 30C REV AUDIO	R48
1	064089	DIODE 1N4003 200PRV 1 AMP	CR1
23	026000	FSTN TAB MALE PCB MT .187X.032	CP1-23
3	027413	HDR .1CTR 6 CKT SQ PIN	PX1A,22A,23A
4	037117	JACK PCB MONO CLOSED CKT	J1-4
1	025933	JACK PHONO DUAL PC MTG	J5
7	020888	JUMPER WIRE 22GA .5X.175	W1-7
1	037836	OPTOISOLATOR ASSY 65 TWIN	OP1
1	041288	PCB FAB 65 DELUXE REVERB	(RAW BOARD)
2	031901	PIN MALE PCB .093	SP1,2
1	024947	RES CF 1/4W 5% 47Ω	R53
1	024961	RES CF 1/4W 5% 470Ω	R51
3	024964	RES CF 1/4W 5% 820Ω	R24,30,64
4	024969	RES CF 1/4W 5% 1.5K	R5,17,60,61
1	024972	RES CF 1/4W 5% 2.7K	R44
2	024979	RES CF 1/4W 5% 6.8K	R9,21
1	024981	RES CF 1/4W 5% 10K	R36
4	024995	RES CF 1/4W 5% 68K	R1,2,13,14
3	024997	RES CF 1/4W 5% 100K	R6,18,41
6	025059	RES CF 1/4W 5% 220K	R12,28,33,35,56,57
1	025063	RES CF 1/4W 5% 390K	R37
1	025065	RES CF 1/4W 5% 470K	R32
7	025069	RES CF 1/4W 5% 1M	R3,15,26,39,40,49,52
1	025075	RES CF 1/4W 5% 2.2M	R38
1	025084	RES CF 1/4W 5% 10M	R45
2	026368	RES CF 1/2W 5% 100Ω	R70,71
1	025113	RES CF 1/2W 5% 10K	R59
1	025832	RES CF 1/2W 5% 22K	R50
9	025116	RES CF 1/2W 5% 100K	R4,11,16,23,29,34,46,4
1	025117	RES CF 1/2W 5% 220K	R43
1	037619	RES CF 1W 5% 82K	R54
1	041706	RES CF 1W 5% 470K	R66
1	027347	RES FILM 1W 5% 2.2K	R27
1	027353	RES FILM 1W 5% 100K	R55
1	027749*	RES MF FUSE 1/4W 5% 22Ω	R69

# Reissue '65 Deluxe Reverb

## PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	036468*	RES MOX FP 1W 5% 470Ω	R62,63
2	036470*	RES MOX FP 1W 5% 10K	R67,68
1	025803*	THERMISTOR 10 OHM 5 AMP C60-11	TH1

## CHASSIS ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047043	CHS ASSY '65 DLX REVERB 120V	(COMPLETE CHASSIS)
4	018022	BUSHING SNAP 5-16X17-32 BLK	(@TRANSFORMER WIRES)
1	026038	BUSHING SR .625X.062X37/64 B;L	(@POWER CABLE 100/120V)
1	010401	BUSHING SR .625X.125X37/64 WHT	(@POWER CABLE 220/230/240V)
1	026541	CABLE ASSY PWR W/.250 TAB 120V	(POWER CABLE 100/120V)
1	033331	CABLE ASSY PWR W/.250 TAB 220/240V	(220/230/240V EXPORT)
1	038602	CABLE ASSY PWR W/.250 TAB AUST	(240V AUSTRALIA ONLY)
1	022707	CHOKE FILTER	L1
1	041293	CHS '65 DELUXE REVERB	(RAW CHASSIS)
1	032219	COLLAR-PILOT LIGHT	
1	037300	COVER CAPACITOR VIBROVERB	
1	048827	FUSE QA 1-1/4X1/4 250V 2 AMP	F1 (100/120V ONLY)
1	020789	FUSE QA 20mmX5mm 250V 1 AMP	F1 (220/230/240V ONLY)
1	036702	FUSEHOLDER 3AG FINGER GRIP	XF1
1	036703	FUSEHOLDER 5mm FINGER GRIP	XF1
1	021741	HOLDER DIAL LITE ASSEMBLY PILOT	(SOCKET ASSY W/OUT COLLAR)
1	021550	JACK PHONE TIP SHUNT 12A	(INTERNAL SPEAKER JACK)
1	021956	JACK PHONE OPEN CIRCUIT 11	(EXTERNAL SPEAKER JACK)
1	013043	JACK PHONE STEREO 12B	J6 (FOOTSWITCH JACK)
1	025718	JEWEL #20 PILOT LITE	(RED INDICATION)
9	024604	KNOB BLACK W/ WHITE STAMP 14000	
4	016352	NUT HEX 3/8-32X3/32 TK NI	(@ 1/4" JACKS)
1	031625	NUT HOLDER PILOT LIGHT 1/16-27	
4	022004	NUT KEPS #8-32 ZINC	(POWER XFMOUNT)
1	041391	PANEL FRONT '65 DLX REVERB	
1	041292	PANEL REAR '65 DLX REVERB 120V	
1	047060	PANEL REAR '65 DXL REV EXPORT	
1	021642	PILOT LIGHT #T47	(BULB)
1	026438	PLUG BUTTON .437" BLK	(@CAPACITOR COVER)
1	017502	POT 10KB 20% SCR ADJ	R58 (BIAS ADJUST)
1	030758	SCRW HI-LO 6X3/8 PHP ZI	(@ REVERB RCA JACKS)
29	038900	SCRW TF 6-32X1/4 PHP ZI	(@ TUBE SKT/XFMRS/CAP COV)
14	028937	SCRW TF 6-32X5/8 PHP ZI TAPTYT	(PCB MOUNTING)
6	023598	SHIELD TUBE	(@ PREAMP TUBES)
3	023580	SOCKET TUBE 8 PIN	(OUTPUT/RECTIFIER TUBES)
6	023606	SOCKET TUBE 9 PIN	(PREAMP TUBES)
14	025936	STAND OFF PCB PUSH ON NYL 3/8L	(PCB MOUNTING)
1	036570	(SWITCH TOGGLE DPST W/NUTS	S1 (POWER SWITCH)
1	036571	SWITCH TOGGLE SPDT W/NUTS	S2 (GROUND SWITCH 120V ONLY)
1	037039	SWITCH TOGGLE SPST W/NUTS	S3 (STANDBY SWITCH)
3	020424	TUBE RING UNIVERSAL (277H-2)	
2	023531	TUBE 12AT7	V3,6
1	041400	TUBE 5AR4 FULL WAVE RECTIFIER	V9
2	023564	TUBE 6V6GTA STR391A	V7,8
4	013341	TUBE VACUUM 7025/12AX7	V1,2,4,5
4	9904300100	WSHR LCK INTL 3/8X.681X.032ZI	(@ 1/4" JACKS/BIAS/ADJ)
1	41316	XFMR PWR DELUXE REVERB 120V	T3 (120V DOMESTIC)
1	041317	XFMR PWR EXPORT	T3 (100/230V EXPORT)
1	041318	XRMR OUTPUT '65 DELUXE REVERB	T2
1	037099	XFMR REVERB VIBROVERB	T1

## Reissue '65 Deluxe Reverb CABINET ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047073	CAB ASSY '65 DELUXE REVERB	(COMPLETE CABINET)
1	041565	BACK ASSY LOWER '65 DLX REV	
1	041567	BACK ASSY UPPER '65 DLX REV	
1	031849	BAG REVERB	(BAG ONLY)
1	025722	CABLE ASSY REVERB 1100MM	(FROM PAN TO CHASSIS)
1	038566	CABLE ASSY SPKR RT ANG 13-1/2	(SPEAKER WIRES)
2	022491	CLAMP CABLE NYL SCRW MNT 5/16	
1	041560	GRILLE ASSY '65 DLX REV	(COMPLETE GRILLE)
2	025395	HANDLE CAP CABINET NICKEL	
1	037790	HANDLE STRAP BLACK RIBBED	(WITHOUT INSERT)
1	032524	INSERT HANDLE	(SPRING STEEL)
1	023192	NAMEPLATE FENDER 65 TWIN (LOGO)	
8	022004	NUT KEPS #8-32 ZINC	(SPEAKER MOUNT)
2	021972	NUT T #10-32X3/4 STR 3 PRNG BLX	(HANDLE MOUNT)
1	028547	REVERB ASSY W/ BAG	(W/PAN, CABLE, BAG)
1	064063	REVERB UNIT 4 SPRING 4AB3C1B	(PAN ONLY)
3	037985	SCRW SMA #2X3/8 PHP BLX	(LOGO MOUNT)
8	037952	SCRW SMA #6X1 OHP NI	(BACKBOARD MOUNT)
4	011678	SCRW SMA #8X1-1/2 OHP BLX	(GRILLE MOUNT)
4	022236	SCRW M #10-32X1-1/8 OHP NI	(HANDLE MOUNT)
7	029828	SCRW PB #8X3/4 PHP ZI	(CHASSIS/REV BAG MOUNT)
1	037617	SPEAKER 12" 8 OHM 50 WATTS	
2	024745	STRAP CHASSIS 4" NICKEL	
8	037215	WSHR C'SNK #6 NI	(BACKBOARD MOUNT)
2	022327	WSHR FLAT #8X7/16 NI	(REVERB BAG MOUNT)
4	029527	WSHR FNSH #8-5/5 F;MGD B;X WX	(GRILLE MOUNT)

## FOOTSWITCH ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	037211	FTSW ASSY VIBRO '65 TWIN	(COMPLETE FOOTSWITCH)
1	021691	BUSHING SR .500X.100X7/16 BLK	(STRAIN RELIEF)
1	022665	COVER CUP DUAL FTSW ASSY	(BOTTOM COVER)
1	016063	DECAL FOOTSWITCH VIBRATO + REV	
1	013172	PLUG PHONE 3 CONDUCTOR 238 RT ANGLE	
2	024042	SWITCH SPST PUSH BUTTON	

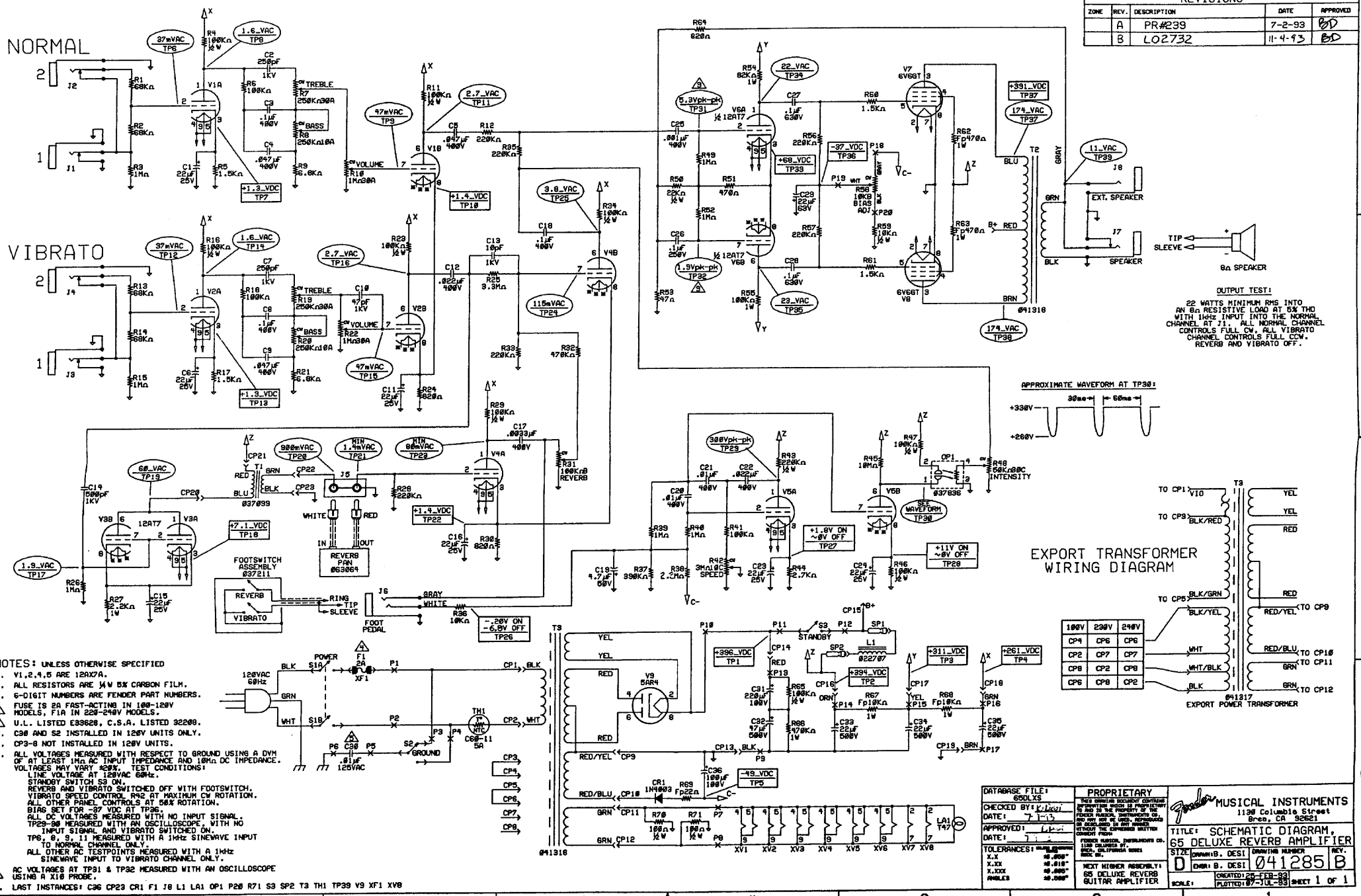
## MISCELLANEOUS

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	047059	MANUAL OWNERS '65 DLX REVERB	
1	041286	SCHEM REDUCED '65 DLX REVERB	

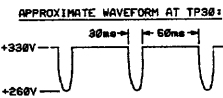
NORMAL

VIBRATO

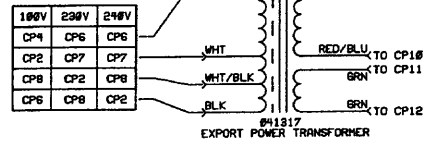
REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
A	PR#239		7-2-93
B	LO2732		11-4-93



OUTPUT TEST:  
22 WATTS MINIMUM RMS INTO  
AN 8Ω RESISTIVE LOAD AT 6% THD  
WITH 1kHz INPUT INTO THE NORMAL  
CHANNEL AT 71. ALL NORMAL CHANNEL  
CONTROLS FULL CW. ALL VIBRATO  
CHANNEL CONTROLS FULL C.W.  
REVERB AND VIBRATO OFF.

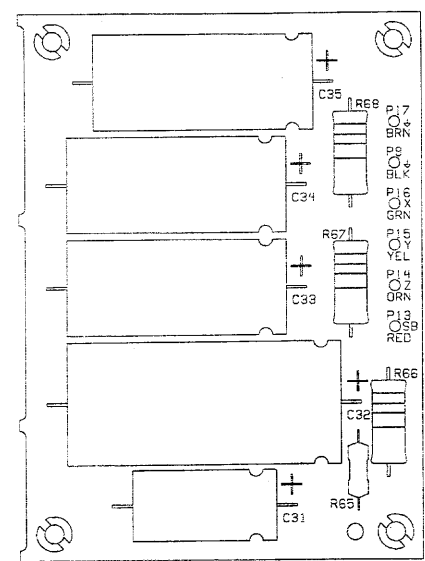
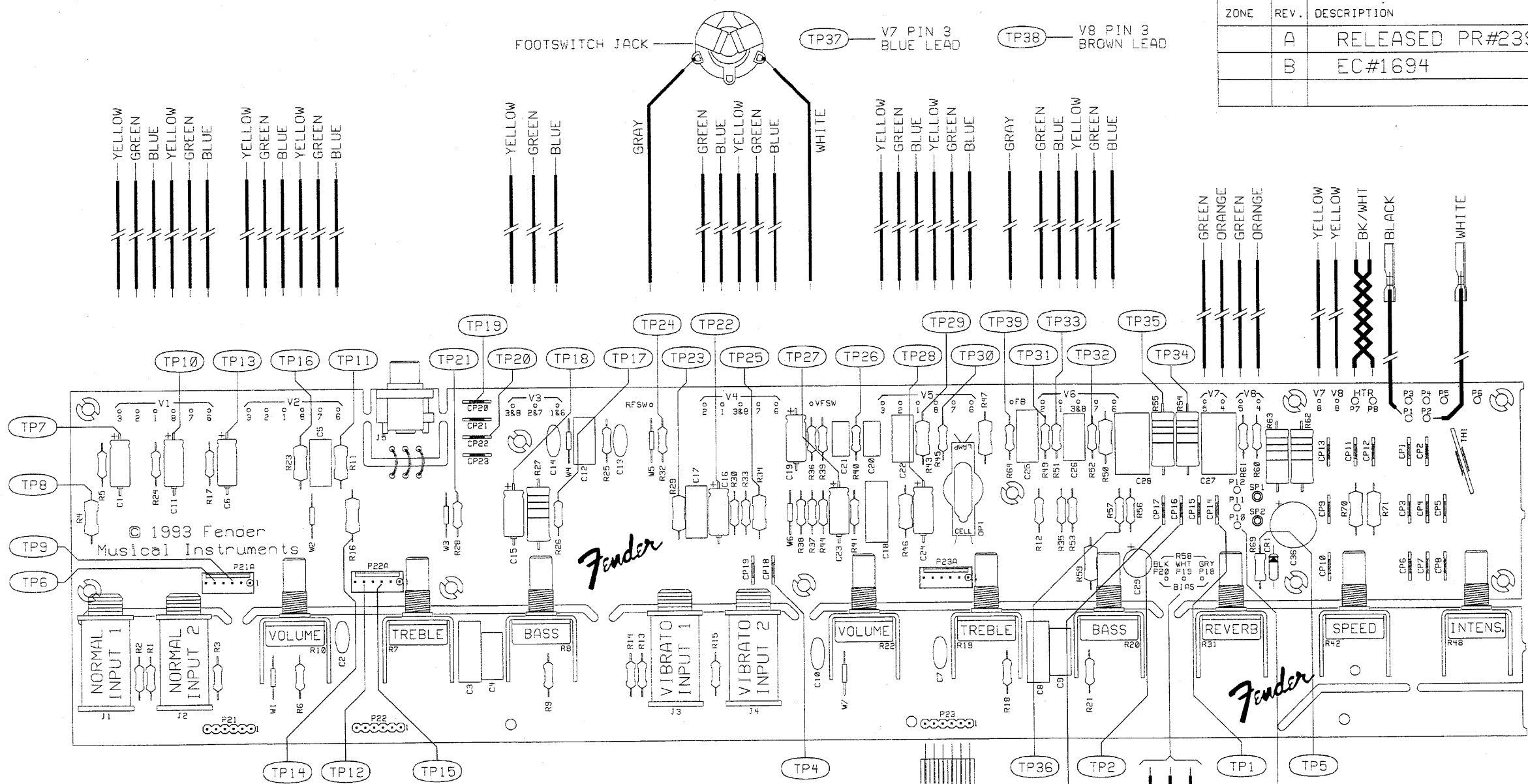


EXPORT TRANSFORMER  
WIRING DIAGRAM



- NOTES: UNLESS OTHERWISE SPECIFIED
1. V1, 2, 4, 5 ARE 12AX7A.
  2. ALL RESISTORS ARE 1/4W 5% CARBON FILM.
  3. 6-DIGIT NUMBERS ARE FENDER PART NUMBERS.
  4. FUSE IS 2A FAST-ACTING IN 100-120V MODELS, 1A IN 220-240V MODELS.
  5. U.L. LISTED C39628, C.S.A. LISTED 32208.
  6. C39 AND S2 INSTALLED IN 120V UNITS ONLY.
  7. CP3-8 NOT INSTALLED IN 120V UNITS.
  8. ALL VOLTAGES MEASURED WITH RESPECT TO GROUND USING A DVM OF AT LEAST 1MΩ AC INPUT IMPEDANCE AND 10MΩ DC IMPEDANCE. VOLTAGES MAY VARY 20% TEST CONDITIONS:
  9. LINE VOLTAGE AT 120VAC 60Hz.
  10. STANDBY SWITCH S3 ON.
  11. REVERB AND VIBRATO SWITCHED OFF WITH FOOTSWITCH.
  12. VIBRATO SPEED CONTROL R42 AT MAXIMUM CW ROTATION.
  13. BIAS SET FOR -37 VDC AT TP26.
  14. ALL DC VOLTAGES MEASURED WITH NO INPUT SIGNAL.
  15. TP29-30 MEASURED WITH AN OSCILLOSCOPE, WITH NO INPUT SIGNAL AND VIBRATO SWITCHED ON.
  16. TP6, 8, 9, 11 MEASURED WITH A 1kHz SINEWAVE INPUT TO NORMAL CHANNEL ONLY.
  17. ALL OTHER AC TESTPOINTS MEASURED WITH A 1kHz SINEWAVE INPUT TO VIBRATO CHANNEL ONLY.
  18. AC VOLTAGES AT TP31 & TP32 MEASURED WITH AN OSCILLOSCOPE USING A X10 PROBE.
  19. LAST INSTANCES: C39 CP23 CR1 F1 J8 L1 LA1 OP1 P28 R71 S3 SP2 T3 TH1 TP39 V9 XF1 XV8

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED PR#239	7-2-93	
	B	EC#1694	5-13-96	



- BROWN
- BLACK
- GREEN
- YELLOW
- ORANGE
- RED

PCB SHOWN AS FABRICATED,  
EXCEPT WITH CAPACITOR BREAK-  
AWAY BOARD SEPARATED

FLEX CABLE INSTALLED  
AT P21, P22 AND P23  
(3 PLACES)

FILM/DWG: SERVICE DIAGRAM				
DATABASE: 65DLXSER		DATE: 07-JUN-96		
LAYERS PLOTTED: 1	2	3	4	10
15	19			

DATABASE FILE: 65DLXSER

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

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

APPROVED: \_\_\_\_\_

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

TOLERANCES: UNLESS OTHERWISE NOTED

X.X ±0.050"

X.XX ±0.010"

X.XXX ±0.005"

ANGLES ±0.500°

PROPRIETARY

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NEXT HIGHER ASSEMBLY:  
65 DELUXE REVERB GUITAR AMPLIFIER

**Fender** MUSICAL INSTRUMENTS

2621 Research Drive  
Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM  
65 DELUXE REVERB AMPLIFIER

SIZE	DRAWN: B. DESI	DRAWING NUMBER	REV.
B	ENGR: B. DESI	041287	B

CREATED: 02-JUN-93  
PLOTTED: 07-JUN-96

SCALE: SHEET 1 OF 1