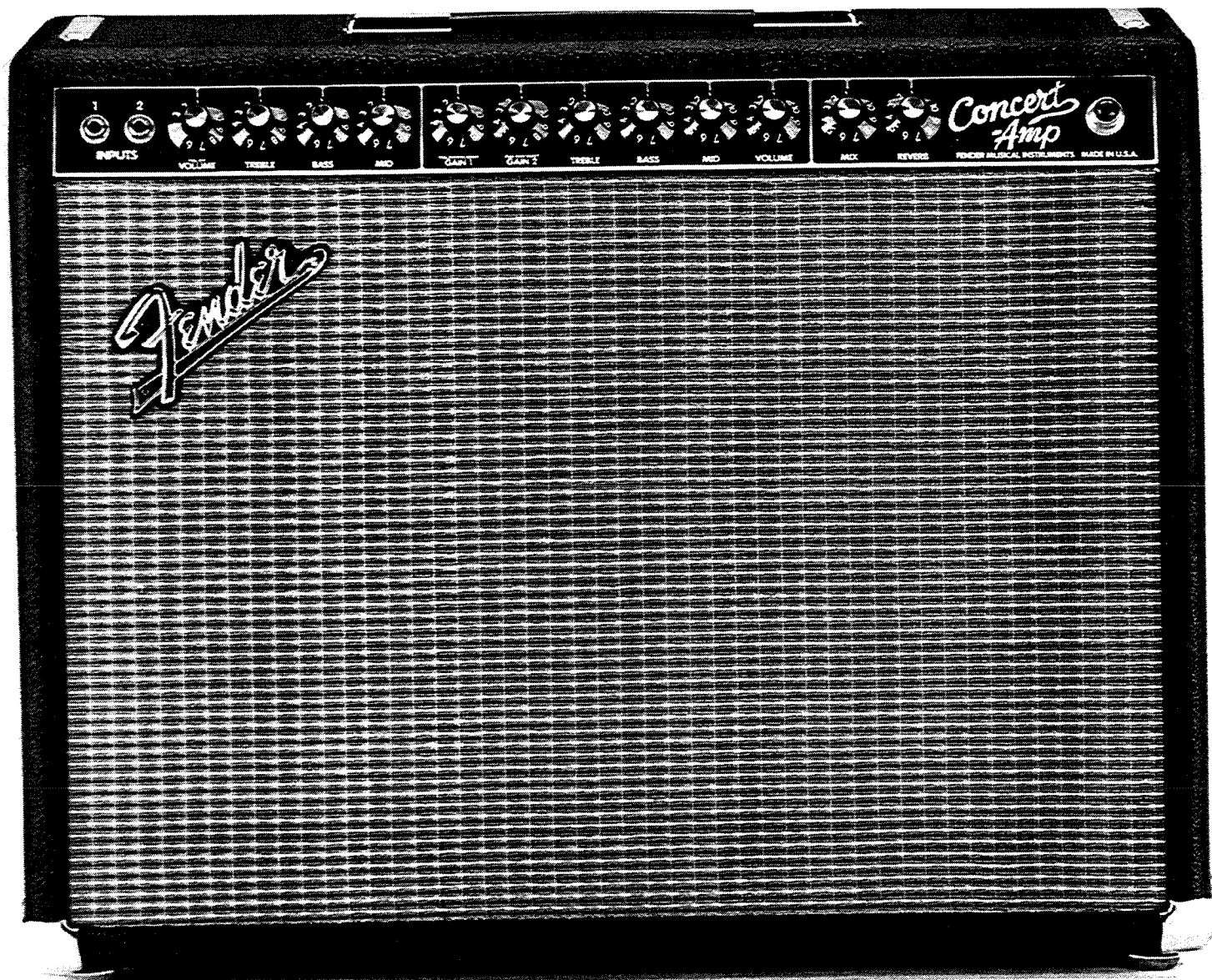


Fender Musical Instruments Corp.

SERVICE MANUAL

'93 Concert Amp Guitar Amplifier





CONCERT AMP

GUITAR AMPLIFIER SERVICE MANUAL

TYPE: PR 245

DECEMBER 1993 REV A.

NOTICE:

The information contained herein is CONFIDENTIAL and PROPRIETARY to Fender Musical Instruments. 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. All specifications subject to change without notice.

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

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

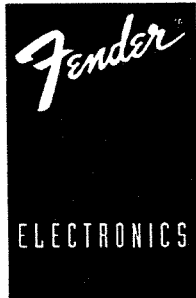
RES CC = Carbon Comp
 RES CF = Carbon Film
 RES FP = Flame Proof
 RES MF = Metal Film
 RES WW = Wire Wound

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 Plating

NOTICE:

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

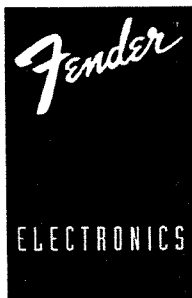


CONCERT AMP

PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|--------------------------------------|--------------------------------|-------------|
| 1 | 041747 | PCB ASSY ALL V SUPER/CONCERT | (STUFFED) | |
| 3 | 037325 | CABLE FLAT 6 CKT 2 INCH | | |
| 1 | 047121 | CABLE JUMPER 6 CKT .1X8.5 | | |
| 1 | 026517 | CAP AE AX 2.2 μ F 50V | C50 | |
| 1 | 038691 | CAP AE AX 4.7 μ F 50V | C53 | |
| 9 | 025960 | CAP AE AX 22 μ F 16V | C1,5,9,13,21,23,49,51,54 | |
| 3 | 024819 | CAP AE AX 22 μ F 500V | C37-39 | |
| 3 | 036954 | CAP AE RDL 22 μ F 63V 20% | C41,55,56 | |
| 2 | 031040 | CAP AE RDL 100 μ F 100V 20% | C17,40 | |
| 4 | 028953 | CAP AE AX 100 μ F 350V 20% | C33-36 | |
| 1 | 028479 | CAP AE RDL 220 μ F 25V 20% | C32 | |
| 2 | 028482 | CAP AE RDL 220 μ F 50V 20% | C42,43 | |
| 2 | 039362 | CAP AE RDL 1000 μ F 35V LOPROFIL | C44,45 | |
| 3 | 069724 | CAP CD 100PF 1000V 10% | C4,47,48 | |
| 2 | 020917 | CAP CD 250PF 1000V 10% | C6,10 | |
| 1 | 025777 | CAP CD 470PF 1000V 10% | C20 | |
| 1 | 011435 | CAP CD 680PF 1000V 10% | C22 | |
| 1 | 017620 | CAP CD 1500PF 1000V 10% | C52 | |
| 1 | 047065 | CAP PFF RDL .0015 μ F 400V 10% | C3 | |
| 1 | 033580 | CAP PFF RDL .0022 μ F 100V 10% | C28 | |
| 1 | 037040 | CAP PFF RDL .0033 μ F 400V | C14 | |
| 2 | 024823 | CAP MPF RDL .01 μ F 400V 10% | C2,15 | |
| 4 | 024833 | CAP MPF RDL .022 μ F 400V 10% | C8,11,12,24 | |
| 1 | 033596 | CAP PFF RDL .068 μ F 100V 10% | C31 | |
| 1 | 024853 | CAP MPF RDL .1 μ F 250V 10% | C27 | |
| 3 | 024854 | CAP MPF RDL .1 μ F 400V 10% | C7,16,19 | |
| 2 | 024855 | CAP MPF RDL .1 μ F 630V 10% | C25,26 | |
| 1 | 027281 | CAP MPF .22 μ F 63V | C30 | |
| 2 | 027286 | CAP MPF .47 μ F 63V | C29,46 | |
| 1 | 024876 | CAP MPF RDL .68 μ F 250V 10% | C18 | |
| 2 | 041510 | CONTROL SNAPIN 25K B | R15,22 | |
| 1 | 037600 | CONTROL SNAPIN 100K B | R49 | |
| 3 | 037597 | CONTROL SNAPIN 250K 30A J TAPER | R13,20,26 | |
| 1 | 041511 | CONTROL SNAPIN 250K B DUAL | R32 | |
| 2 | 041507 | CONTROL SNAPIN 1M 10A | R14,21 | |
| 3 | 041512 | CONTROL SNAPIN 1M 30A | R6,7,8 | |
| 10 | 006260 | DIODE 1N4448 SIGNAL BENT | CR3,4,7-9,11-14,26 | |
| 8 | 026730 | DIODE 1N4006/1N5062 800PRV 1A | CR15-21,27 | |
| 2 | 029690 | DIODE HV 3KV 200MA | CR6,5 | |
| 1 | 027329 | DIODE ZEN 1N5228B 3.9V 5% | CR2 | |
| 2 | 028119 | DIODE ZEN 1N5353B 16V 5W 5% | CR22,23 | |
| 1 | 031017 | DIODE ZEN 1N5223B 2.7V 5% | CR1 | |
| 1 | 031635 | DIODE ZEN 1N5240B 10V 5% | CR10 | |
| 21 | 025802 | FSTN TAB MALE .250X.032 PCB MT | CP1-20,25 | |
| 4 | 026000 | FSTN TAB MALE PCB MT .187X.032 | CP21-24 | |
| 1 | 022546 | FUSE HOLDER PCB MTG UNIVERSAL | XF1(W/O CARRIER, SEE CHS ASSY) | |

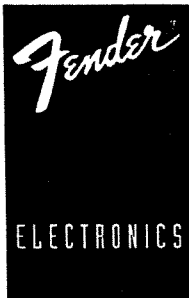


CONCERT AMP

PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY CONTINUED

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|---------|--------------------------------|----------------------------|--------------------------|
| 2 | 031611 | IC DUAL OP PC4560 | U2,3 | |
| 2 | 037117 | JACK PCB MONO CLOSED CKT | J1,2 | (INPUTS) |
| 1 | 025933 | JACK PHONO DUAL PC MTG | J5 | (REVERB RCA JACKS) |
| 1 | 031570 | JACK PHONE PCB STEREO PREMIUM | J6 | (LINE OUT) |
| 3 | 037036 | JACK PHONE PCB MONO CA PREMIUM | J3,4,7, | (EFF SND, EFF RTN, FTSW) |
| 35 | 020888 | JUMPER WIRE 22GA .5X.175 | W1-35 | |
| 7 | 026043 | JUMPER WIRE 18GA .8X.175 | JP1-7 | |
| 1 | 025926 | LED RED PC MOUNT 3MM | LD2 | |
| 1 | 041730 | LED YELLOW PCB MOUNT 3MM | LD1 | |
| 1 | 041746 | PCB FAB '93 CONCERT/SUPER | (RAW BOARD) | |
| 2 | 031901 | PIN MALE PCB .093 | SP1,2 | |
| 3 | 036613 | RELAY 24 VOLT | RY1-3 | |
| 2 | 025818 | RES CF 1/4W 5% 4.7Ω | R112,113 | |
| 1 | 024953 | RES CF 1/4W 5% 120Ω | R70 | |
| 1 | 024959 | RES CF 1/4W 5% 330Ω | R115 | |
| 1 | 029451 | RES CF 1/4W 5% 430Ω | R38 | |
| 1 | 024961 | RES CF 1/4W 5% 470Ω | R63 | |
| 5 | 024962 | RES CF 1/4W 5% 560Ω | R28,42,90,92,93 | |
| 9 | 024969 | RES CF 1/4W 5% 1.5K | R5,10,17,24,46,51,66,67,74 | |
| 2 | 024971 | RES CF 1/4W 5% 2.2K | R37,76 | |
| 2 | 024975 | RES CF 1/4W 5% 3.9K | R102,114 | |
| 1 | 026510 | RES CF 1/4W 5% 9.1K | R62 | |
| 3 | 024981 | RES CF 1/4W 5% 10K | R87,88,94 | |
| 4 | 024985 | RES CF 1/4W 5% 15K | R35,36,75,103 | |
| 1 | 024988 | RES CF 1/4W 5% 27K | R31 | |
| 1 | 028865 | RES CF 1/4W 5% 30K | R40 | |
| 1 | 024989 | RES CF 1/4W 5% 33K | R104 | |
| 1 | 024993 | RES CF 1/4W 5% 47K | R72 | |
| 2 | 024995 | RES CF 1/4W 5% 68K | R1,2 | |
| 4 | 024997 | RES CF 1/4W 5% 100K | R11,12,18,19 | |
| 3 | 028955 | RES CF 1/4W 5% 130K | R33,34,41 | |
| 3 | 025059 | RES CF 1/4W 5% 220K | R53,58,59 | |
| 1 | 025828 | RES CF 1/4W 5% 430K | R39 | |
| 7 | 025065 | RES CF 1/4W 5% 470K | R25,48,50,84,85,55,116 | |
| 9 | 025069 | RES CF 1/4W 5% 1M | R3,27,44,64,65,81,82,83,86 | |
| 1 | 025075 | RES CF 1/4W 5% 2.2M | R54 | |
| 1 | 025084 | RES CF 1/4W 5% 10M | R71 | |
| 2 | 025811* | RES MF 1/4W 1% 5.11K | R78,79 | |
| 1 | 016963* | RES MF 1/4W 1% 8.25K | R77 | |
| 1 | 015583* | RES MF 1/4W 1% 46.4K | R80 | |
| 2 | 031767 | RES CF 1/2W 5% 15Ω | R110,111 | |
| 2 | 041741* | RES MOX FP 1/2W 5% 47Ω | R107,108 | |
| 1 | 025941 | RES CF 1/2W 5% 560Ω | R45 | |
| 2 | 037169 | RES CF 1/2W 5% 1.8K | R69,91 | |
| 1 | 028861 | RES CF 1/2W 5% 3.3K | R89 | |
| 1 | 031065 | RES CF 1/2W 5% 91K | R61 | |



CONCERT AMP

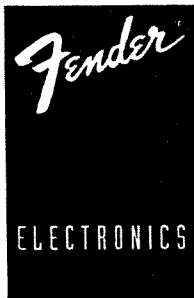
PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY CONTINUED

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|---------|-----------------------------------|------------------------|-------------|
| 7 | 025116 | RES CF 1/2W 5% 100K | R4,9,16,23,47,52,60 | |
| 4 | 025117 | RES CF 1/2W 5% 220K | R95-98 | |
| 1 | 028045 | RES FILM 1W 5% 220Ω | R109 | |
| 2 | 036468* | RES MOX FP 1W 5% 470Ω | R56,57 | |
| 1 | 036621 | RES FILM 1W 5% 6.8K | R68 | |
| 1 | 041739* | RES MOX FP 1W 5% 6.8K | R100 | |
| 2 | 041738 | RES CF 1W 5% 15K | R29,30 | |
| 1 | 041277 | RES CF 2W 5% 820Ω | R73 | |
| 1 | 041737 | RES CF 2W 5% 33K | R43 | |
| 1 | 041740* | RES MOX FP 2W 5% 4.7K | R99 | |
| 1 | 041742 | RES WW 7W 10% 10K | R101 | |
| 2 | 029047 | RES WW BT 7W 10% 270Ω | R105,106 | |
| 4 | 017433 | SCRW M 6-32X3/8 PHP BLX | | |
| 14 | 039367 | SCRW M 6-32X3/8 PHPS SS | (STANDOFF MOUNT) | |
| 4 | 029167 | SOCKET TUBE 9 PIN PCB MOUNT | XV2,3,4,6 | |
| 2 | 029343 | SOCKET TUBE 8 PIN PCB MOUNT | XV7,8 | |
| 14 | 016440 | STNDOFF RND AL 6-32X1X1/4 | (PCB TO CHASSIS MOUNT) | |
| 1 | 038652 | SWITCH SLIDE 4P3T | S6 | |
| 1 | 028503* | THERMISTOR 10 OHM 5A C60-11 | TH1 | |
| 1 | 041261* | VOLT REF LM4040DCZ-10 10V1% TO-92 | U1 | |

CHASSIS ASSEMBLY

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|------------------------------------|-------------------------------|---------------------|
| 1 | 047283 | CHS ASSY '93 CONCERT 120V | | |
| 1 | 018022 | BUSHING SNAP 5/16X17/32 BLK | (@ REVERB XFMR WIRES) | |
| 2 | 028069 | BUSHING SNAP 3/4X1-1/8 WHT | (@ XFMR WIRES) | |
| 1 | 026038 | BUSHING SR .625X.062X37/64 BLK | (@ POWER CABLE 100/120V ONLY) | |
| 1 | 010401 | BUSHING SR .625X.125X37/64WHT | (@ POWER CABLE 220/230/240V) | |
| 1 | 026541 | CABLE ASSY PWR W/.250 TAB 120V | (POWER CABLE 100/120V ONLY) | |
| 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 | 040993 | CABLE ASSY PWR W .250 TAB U.K. 5A | (240V UNITED KINGDOM ONLY) | |
| 1 | 040948 | CHASSIS '93 CONCERT | (RAW CHASSIS) | |
| 1 | 022707 | CHOKE FILTER | L1 | |
| 1 | 032219 | COLLAR-PILOT LIGHT | | |
| 1 | 022547 | FUSE CARRIER 3AG | (@ XF1 100/120V ONLY) | |
| 1 | 022548 | FUSE CARRIER 5mm | (@ XF1 230/240V EXPORT) | |
| 1 | 077982 | FUSE QA 1-1/4X1/4 250V 3A | F1 | (100/120V ONLY) |
| 1 | 020793 | FUSE QA 20mmX5mm 250V 1.6A | F1 | (230/240V ONLY) |
| 1 | 021741 | HOLDER IDAL LITE ASSEMBLY PILO | | |
| 1 | 021550 | JACK PHONE TIP SHUNT 12A | J8 | (MAIN SPEAKER JACK) |



CONCERT AMP

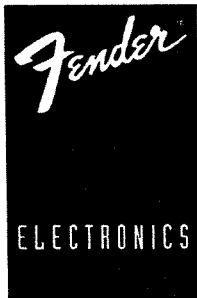
PARTS LIST

CHASSIS ASSEMBLY CONTINUED

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|------------|---------------------------------|-----------|-------------------------------|
| 1 | 041701 | JACK PHONE TRANSFER 13A | J9 | (EXT. SPEAKER JACK) |
| 1 | 025718 | JEWEL #20 PILOT LITE | | |
| 12 | 024604 | KNOB BLACK W/WHITE STAMP 14000 | | |
| 4 | 016352 | NUT HEX 3/8-32X3/32 TK NI | | (@ INPUT/SPEAKER JACKS) |
| 1 | 031625 | NUT HOLDER PILOT LIGHT 1/16-27 | | |
| 8 | 022004 | NUT KEPS #8-32 ZINC | | (TRANSFORMER MOUNT) |
| 1 | 047282 | PAD VIBRATION DAMPNER SPR/CNCT | | |
| 1 | 041755 | PANEL REAR '93 CONCERT | | |
| 1 | 040949 | PANEL FRONT '93 CONCERT | | |
| 1 | 021642 | PILOT LIGHT #47 | | |
| 4 | 039370 | RETAINER ANCHOR TUBE SPRING | | (OUTPUT TUBE MOUNT) |
| 2 | 039369 | RETAINER TOP TUBE SPRING | | (OUTPUT TUBE MOUNT) |
| 1 | 030758 | SCRW HI-LO 6X3/8 PHP ZI | | (@ REVERB JACKS) |
| 8 | 016473 | SCRW M 8-32X1/2 PHP ZI | | (XFMR MOUNT) |
| 10 | 017433 | SCRW M 6-32X3/8 PHP BLX | | (PCB TO CHASSIS MOUNT) |
| 4 | 028937 | SCRW TF 6-32X5/8 PHP ZI TAPTYT | | (FUSE HOLDER PCB MOUNT) |
| 10 | 038900 | SCRW TF 6-32X1/4 PHP ZI | | (REV XFMR/CHOKE/SOCKET MOUNT) |
| 2 | 023598 | SHIELD TUBE | | |
| 4 | 039371 | SPRING EXTENSION 1.81X.15" | | (OUTPUT TUBE MOUNT) |
| 4 | 025936 | STAND OFF PCB PUSH ON NY 3/8L | | (FUSE HOLDER PCB MOUNT) |
| 1 | 036570 | SWITCH TOGGLE DPST W/NUTS | | (POWER SWITCH) |
| 1 | 037039 | SWITCH TOGGLE SPST W/NUTS | | (STANDBY SWITCH) |
| 2 | 023531 | TUBE 12AT7 | | V3,4 |
| 2 | 039214 | TUBE 5881/6L6WGC | | V7,8 |
| 4 | 013341 | TUBE VACUUM 7025/12AX7 | | V1,2,5,6 |
| 2 | 039364 | WASHER EPDM TUBE CLAMP DAMPNER | | (@ OUTPUT TUBE MOUNT) |
| 4 | 9904300100 | WSHR LCK INTL 3/8X.681X.032 ZI | | |
| 1 | 041754 | XFMR OUTPUT '93 CONCERT/SUPER | T2 | |
| 1 | 037099 | XFMR REVERB VIBROVERB | T1 | |
| 1 | 041752 | XFMR PWR '93 CONCERT/SUPER 120V | T3 | (120V DOMESTIC ONLY) |
| 1 | 041753 | XFMR PWR '93 CONCERT/SUPER EXP | T3 | (100V/120V/220V/230V/240V) |

CABINET ASSEMBLY

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|------------|--------------------------------|-----------|--------------------|
| 1 | 040913 | CAB ASSY '93 CONCERT | | (COMPLETE CABINET) |
| 1 | 041971 | BACK ASSY LOWER '93 CONCERT | | |
| 1 | 041969 | BACK ASSY UPPER '93 CONCERT | | |
| 1 | 031849 | BAG-REVERB SPRING UNIT | | (BAG ONLY) |
| 1 | 025722 | CABLE ASSY REVERB 1100MM | | |
| 1 | 038566 | CABLE ASSY SPKR RT ANG 12-1/2" | | (SPEAKER CABLE) |
| 1 | 012582 | CLAMP CABLE NYL SCRW MNT 1/4 | | |
| 1 | 9906900590 | CLAMP CABLE NYL ADHESIVE | | |



CONCERT AMP

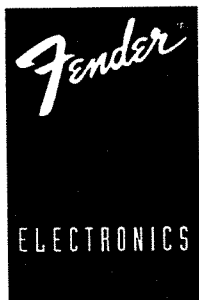
PARTS LIST

CABINET ASSEMBLY CONTINUED

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|------------------------------------|--------------------------|-------------|
| 4 | 026566 | CORNER 2 HOLE W/TAB NI | | |
| 4 | 019276 | GLIDE CAB 1.24X.335 NI(STEEL ONLY) | | |
| 4 | 019275 | GLIDE CUSHION INSERT | (RUBBER ONLY) | |
| 1 | 040914 | GRILLE ASSY CONCERT | (COMPLETE GRILLE) | |
| 1 | 027846 | HANDLE 9.25" NO LOGO | (RUBBER ONLY, NO INSERT) | |
| 2 | 019279 | HANDLE CAP 2-3/16 NI | | |
| 1 | 032524 | INSERT HANDLE | (SPRING STEEL) | |
| 1 | 023192 | NAMEPLATE FENDER | (LOGO) | |
| 8 | 021972 | NUT T 10-32X3/4 STR 3 PRNG BLX | (HANDLE/SPEAKER MOUNT) | |
| 1 | 028453 | PAD CARDBOARD REVERB | (INSIDE REVERB BAG) | |
| 1 | 028547 | REVERB ASSY W/BAG | (PAN, BAG, CABLE) | |
| 1 | 064063 | REVERB UNIT 4 SPRING 4AB3C1B | (PAN ONLY) | |
| 4 | 026571 | SCRW CORNER MOUNTING | | |
| 4 | 022244 | SCRW M 10-32X1-1/8 OHP NI | (HANDLE MOUNT) | |
| 4 | 026577 | SCRW M 10-32X1 PHP BLX | (SPEAKER MOUNT) | |
| 4 | 022236 | SCRW M 8-32X3-1/4 OHP NI | (CHASSIS MOUNT) | |
| 6 | 029828 | SCRW PB 8X3/4 PHP ZI | (CHASSIS/CLAMP MOUNT) | |
| 8 | 037952 | SCRW SMA #6X1 OHP NI | (BACKBOARD MOUNT) | |
| 3 | 037985 | SCRW SMA 2X3/8 PHP BLX | (LOGO MOUNT) | |
| 4 | 026625 | SCRW WOOD 8X1 FH | (GLIDE MOUNT) | |
| 1 | 037617 | SPEAKER 12" 8Ω 50 WATTS | | |
| 2 | 024752 | STRAP CHASSIS 4-1/2" NICKEL | (CHASSIS MOUNT) | |
| 8 | 037215 | WSHR C'SNK #6 NI | (BACKBOARD MOUNT) | |
| 2 | 022327 | WSHR FLAT 8X7/16 NI | (REVERB BAG MOUNT) | |

FOOTSWITCH ASSEMBLY

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|--------------------------------|-----------------------|-------------|
| 1 | 040409 | FTSW ASSY 3 BTTN CH/GA/RV | (COMPLETE FOOTSWITCH) | |
| 1 | 028895 | CABLE ASSY FTSW RT ANG 12' | (FOOTSWITCH CABLE) | |
| 2 | 006260 | DIODE 1N4448 SIGNAL BENT | CR2,3 | |
| 3 | 031017 | DIODE ZENER 1N5223B 2.7V 5% | CR1,4,5 | |
| 1 | 028109 | HSG END CUP LEFT FTSW | | |
| 1 | 028143 | HSG END CUP RIGHT FTSW | | |
| 1 | 028141 | HSG FTSW 3 BUTTON | | |
| 1 | 037036 | JACK PHONE PCB MONO CA PREMIUM | J1 | |
| 3 | 031871 | LED BI-COLOR 5mmX5mm | LD1,2,3 | |
| 1 | 040514 | PCB ASSY FTSW 3 BTTN CH/GA/RV | | |
| 1 | 040513 | PCB FAB FTSW 3 BTTN PERFORMER | (RAW BOARD) | |
| 1 | 040408 | PLATE TOP FTSW 3 BTTN CH/GA/RV | | |
| 1 | 024952 | RES CF 1/4W 100Ω 5% | R1 | |
| 8 | 028889 | SCRW SMB 6X1/4 PHP | | |
| 3 | 037722 | SPACER RND NYL .120X.187X.680 | | |



CONCERT AMP

PARTS LIST

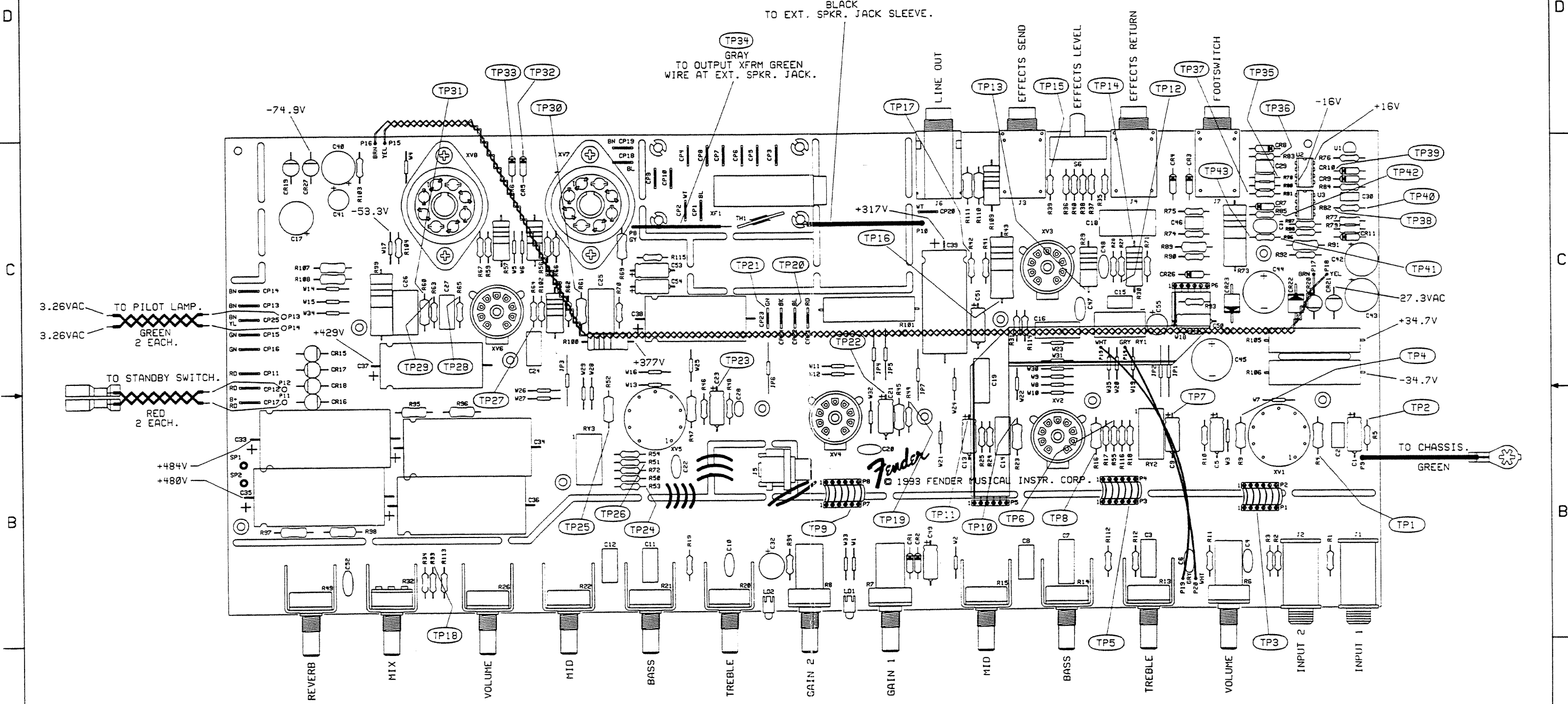
FOOTSWITCH ASSEMBLY CONTINUED

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|----------------------------|-----------|-------------|
| 3 | 028714 | SWITCH PUSH SPDT | S1,2,3 | |
| 3 | 031899 | WSHR NYL .485X.775X.150 TK | | |

MISCELLANEOUS

| QTY | PART # | DESCRIPTION | REFERENCE | DESIGNATION |
|-----|--------|------------------------------------|-----------|-------------|
| 1 | 041757 | CARTON '93 CONCERT | | |
| 8 | 038535 | EPERANFOAM CORNER 5-1/2" | | |
| 1 | 041750 | MANUAL OWNERS '93 CONCERT/SUPER | | |
| 1 | 041744 | SCHEM REDU W/SVC '93 SUPER/CONCERT | | |

| REVISIONS | | | | |
|-----------|------|----------------|-----------|-----------|
| ZONE | REV. | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED PR244 | 20-AUG-93 | |
| | B | EC 1043 | 15-OCT-93 | <i>MW</i> |

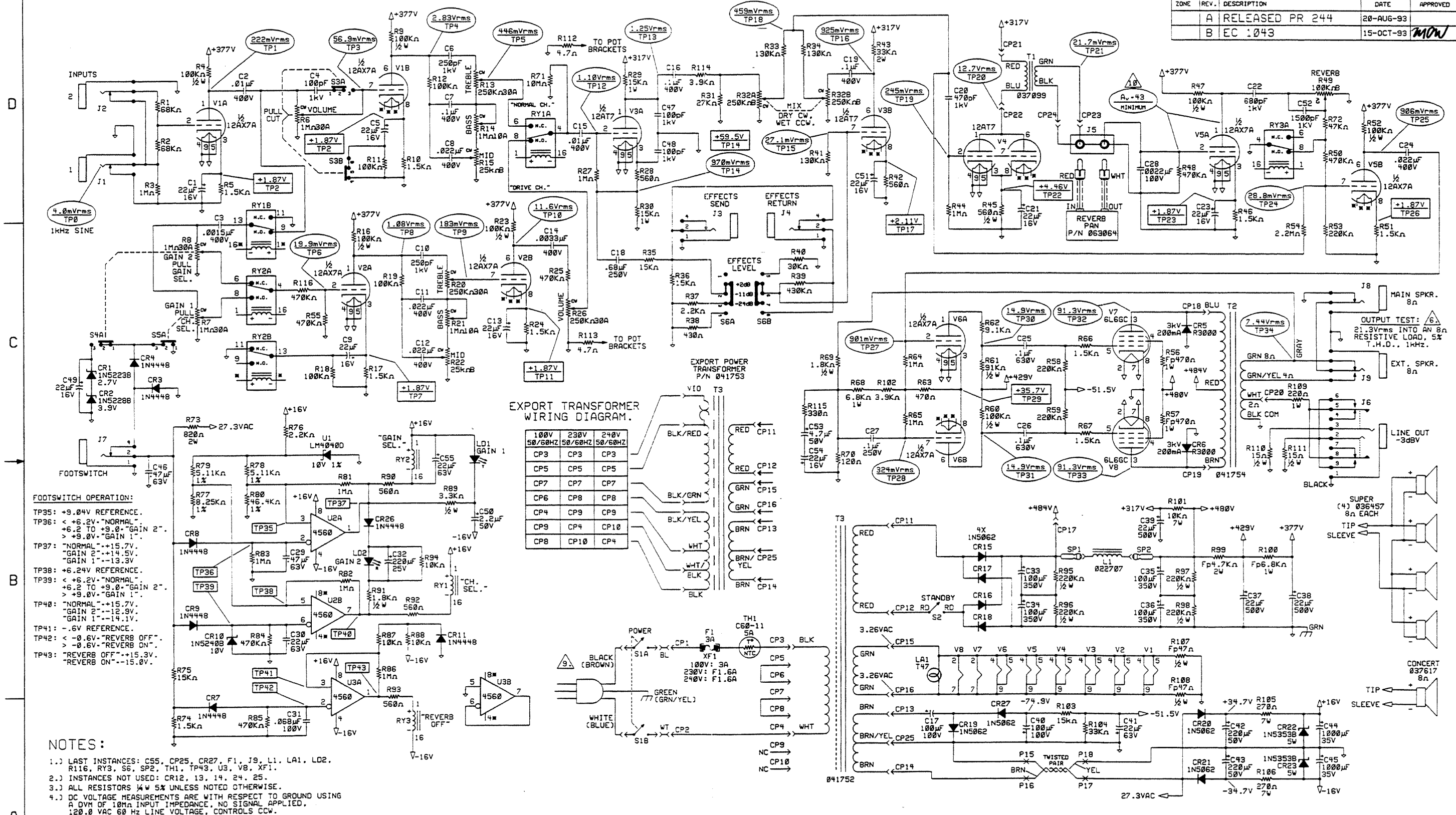


FILM/DWG: SERVICE DIAGRAM
 DATABASE: CNCRTP_B.DBF DATE: 18-OCT-93
 LAYERS PLOTTED: 1 2 3 4 10 18

NOTES:
 1.) PCB SHOWN AS FABRICATED.

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| DATABASE FILE: 7244P.DBF CHECKED BY: <i>MW</i> DATE: 10/19/93 APPROVED: <i>MW</i> DATE: 10/19/93 TOLERANCES: UNLESS OTHERWISE SPECIFIED: X.X .050" X.XX .010" X.XXX .005" ANGLES .500" | PROPRIETARY THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF THE FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. 1130 COLUMBIA ST. BREA, CALIFORNIA 92621 NO PARTS, NO SLURTS. NEXT HIGHER ASSEMBLY: SUPER AND CONCERT GUITAR AMPS. | FENDER MUSICAL INSTRUMENTS 1130 Columbia Street Brea, CA 92621 TITLE: SERVICE DIAGRAM, '93 SUPER AND CONCERT. SIZE: DRAWN: WILKENS DRAWING NUMBER: 041745 REV. B ENGR: WILKENS CREATED: 15-SEP-93 PLOTTED: 18-OCT-93 SHEET 1 OF 1 |
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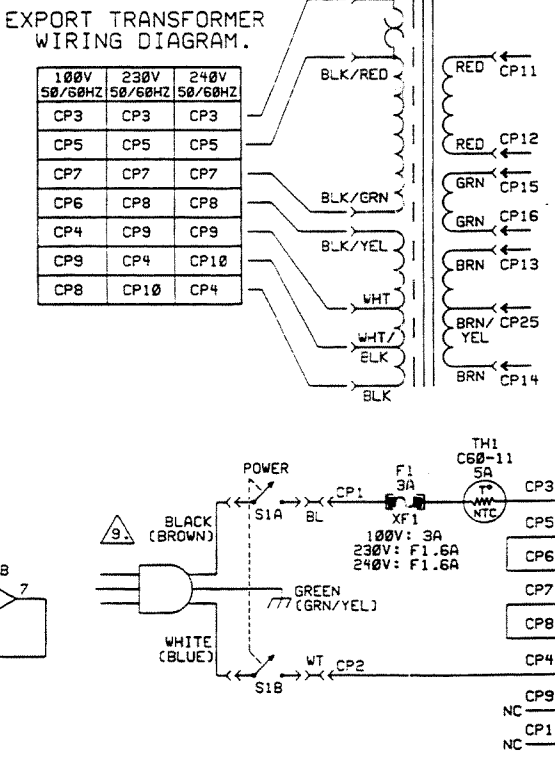
| REVISIONS | | | | |
|-----------|------|-----------------|-----------|----------|
| ZONE | REV. | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED PR 244 | 20-AUG-93 | |
| | B | EC 1043 | 15-OCT-93 | MOW |



- FOOTSWITCH OPERATION:
- TP35: +9.04V REFERENCE.
 - TP36: < +6.2V "NORMAL", +6.2 TO +9.0 "GAIN 2", +9.0V "GAIN 1".
 - TP37: "NORMAL" -15.7V, "GAIN 2" -14.5V, "GAIN 1" -13.3V.
 - TP38: +6.24V REFERENCE.
 - TP39: < +6.2V "NORMAL", +6.2 TO +9.0 "GAIN 2", +9.0V "GAIN 1".
 - TP40: "NORMAL" -15.7V, "GAIN 2" -12.9V, "GAIN 1" -14.1V.
 - TP41: -.6V REFERENCE.
 - TP42: < -.6V "REVERB OFF", -.6V "REVERB ON".
 - TP43: "REVERB OFF" +15.3V, "REVERB ON" -15.0V.

NOTES:

- LAST INSTANCES: C55, CP25, CR27, F1, J9, L1, LA1, LD2, R116, RY3, S6, SP2, TH1, TP43, U3, V8, XF1.
- INSTANCES NOT USED: CR12, 13, 14, 24, 25.
- ALL RESISTORS 1/4W 5% UNLESS NOTED OTHERWISE.
- DC VOLTAGE MEASUREMENTS ARE WITH RESPECT TO GROUND USING A DVM OF 10MA INPUT IMPEDANCE, NO SIGNAL APPLIED, 120.0 VAC 60 Hz LINE VOLTAGE, CONTROLS CCW.
- AC VOLTAGE MEASUREMENTS ARE WITH RESPECT TO GROUND USING A DVM OF 1mA MINIMUM INPUT IMPEDANCE, EFFECTS LEVEL SELECTOR SWITCH AT -11 dB, ALL CONTROLS AT 50% ROTATION (BETWEEN "5" AND "6"), "GAIN 2" SELECTED, REVERB OFF, SIGNAL APPLIED AT J1.
- FOR OUTPUT TEST: 86 mVrms SINE AT EFFECTS RETURN JACK, EFFECTS LEVEL SELECTOR SWITCH AT -24 dB, MIX CONTROL FULL CW ("WET").
- VOLTAGES MAY VARY ±20%.
- SIX-DIGIT NUMBERS ARE FENDER PART NUMBERS.
- COLORS IN PARENTHESIS ARE FOR 230V AND 240V UNITS.
- GAIN BETWEEN V5A PINS 1 AND 2 SHOULD BE 43 MINIMUM.



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| DATABASE FILE: 22445.DBF CHECKED BY: <i>[Signature]</i> DATE: 10/1/93 APPROVED: <i>[Signature]</i> DATE: 10/1/93 TOLERANCES: UNLESS OTHERWISE SPECIFIED: X.X .050" X.XX .010" X.XXX .005" ANGLES .500° | PROPRIETARY THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF THE FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. 1130 COLUMBIA ST. BREA, CALIFORNIA 92621 NO PARTS, NO SLITS. | FENDER MUSICAL INSTRUMENTS 1130 Columbia Street Brea, CA 92621 TITLE: SCHEMATIC DIAGRAM, '93 SUPER/CONCERT. SIZE: D DRAWN: WILKENS DRAWING NUMBER: 041743 REV: B ENGR: WILKENS NEXT HIGHER ASSEMBLY: SUPER AND CONCERT GUITAR AMPS. SCALE: NONE PLOTTED: 18-OCT-93 SHEET 1 OF 1 |
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