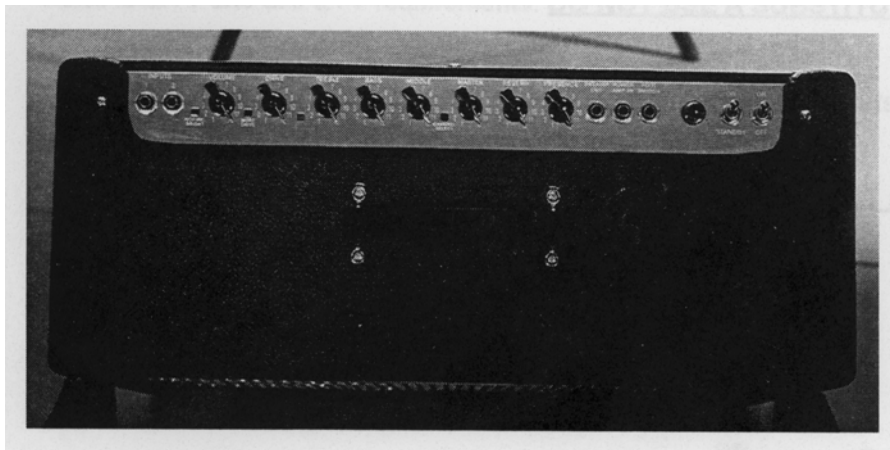


HOT ROD DEVILLE

410 COMBO
212 COMBO

SERVICE MANUAL



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- Notices
- Specifications
- Parts lists:
 - PCB assembly
 - Chassis assembly
 - Cabinet assembly
 - Footswitch assembly
- Miscellaneous
- Schematics/diagrams

HOT ROD DEVILLE

(This is the model name for warranty claims)

SERVICE MANUAL

SEPTEMBER 1996

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

HOT ROD DEVILLE

SPECIFICATIONS

Product Release No.:	PR 247 <i>(This is not a model number)</i>	
	Hot Rod Deville	Hot Rod Deville 212
Input Impedance:	Input 1: 1M ohm Input 2: 136k Ω	Input 1: 1M ohm Input 2: 136k Ω
Power output:	60 Watts RMS into 8 or 4 Ω @ 5% THD	60 Watts RMS into 4 or 2 Ω @ 5% THD
Preamp Out Output Impedance:	1.5k Ω max	1.5k Ω max
Power Amp In Sensitivity:	230mV for clipping	230mV for clipping
Power Amp in Input Impedance:	54k Ω	54k Ω
Speaker Complement:	Four 8 ohm Fender Model V1030 Special Design 10" Speakers (P/N 048832)	Two 8 ohm Fender Re-issue "Gold Label" 12" speakers (P/N 037617)
Dimensions:		
Height:	23.5" (59.7 cm)	21" (53.3 cm)
Width:	23.5" (59.7 cm)	24.25" (61.6 cm)
Depth:	10.75" (27.3 cm)	10.75" (27.3 cm)
Weight:	50 lbs. (22.7 kg)	53.5 lbs. (24.2kg)

Product specifications are subject to change without notice

PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	050388003	PCB ASSY H/R DEVILLE 212	STUFFED
3	028104	BUTTON PUSH SWITCH BLACK	@S1,2,3
1	050688	CABLE JMPR 2 CKT .156 ROUND	
3	050687	CABLE JMPR 6 CKT .156 ROUND	
1	041311	CABLE REVERB	@U2
4	038689001	CAP AE AX .47uF 100V	C12,16,19,20
1	038690001	CAP AE AX 1.0uF 100V	C8
5	009512	CAP AE AX 22uF 25V 20%	C9,14,21,49,50
2	036954	CAP AE RDL 22uF 63V 20%	C38,45
2	024819	CAP AE AX 22uF 500V	C35,36
1	038693001	CAP AE AX 47uF 16V	C1
2	024820	CAP AE AX 47uF 350V	C33,34
4	031040	CAP AE RDL 100uF 100V 20%	C37,39,42,43
2	028953	CAP AE AX 100uF 350V 20%	C31,32

HOT ROD DEVILLE

PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	028494	CAP AE RDL 1000uF 35V 20%	C400,41
1	038698001	CAP CA 47PF 100V	C15
2	020909	CAP CD 47PF 1000V 10%	C28,30
2	020917	CAP CD 250PF 1000V 10%	C3,7
1	025986	CAP CD 390PF 1000V 10%	C11
1	038701001	CAP CA 470PF 50V	C13
1	025995	CAP CD 8200PF 1KV 20%	C53
2	038703001	CAP CA .1uF 50V	C54,55
1	027255	CAP MPF .001uF 100V	C22
1	027262	CAP MPF .0068uF 100V	C52
3	024833	CAP MPF RDL .022uF 400V 10%	C6,18,24
2	024845	CAP MPF RDL .047uF 400V 10%	C2,10
2	027275	CAP MPF .068uF 100V	C4,44
1	027278	CAP MPF .1uF 50V	C29
1	024853	CAP MPF RDL .1uF 250V 10%	C25
1	024854	CAP MPF RDL .1uF 400V 10%	C5
2	024855	CAP MPF RDL .1uF 630V 10%	C26,27
2	027281	CAP MPF .22uF 63V	C46,47
3	027286	CAP MPF .47uF 63V	C17,48,51
1	047065	CAP PFF .0015uF 400V 10%	C23
1	047031	CONTROL SNAPIN 25K 30C	R67 PRESENCE
1	027873	CONTROL PCB MT LIN 30% 25K	R82 BIAS ADJUST
2	041510	CONTROL SNAPIN 25K B	R15,39 MIDDLE, REVERB
1	037600	CONTROL SNAPIN 100K B	R26 MASTER
3	047540	CONTROL SNAPIN 250K 15A	R6,7,14 VOLUME, DRIVE, BASS
1	037597	CONTROL SNAPIN 250K 30A	R13 TREBLE
9	026730001	DIODE 1N4006 800V	CR3,6-12,15
8	006260	DIODE 1N4448 SIGNAL	CR16,18,20,21,23-25,27
2	029690001	DIODE HV 3KV 200mA	CR4,5
1	027329001	DIODE ZEN 1N5228B 3.9V 5%	CR19
2	031729001	DIODE ZEN 1N5231B .5W 15V 5%	CR17,22
2	031635001	DIODE ZEN 1N5240B 10V 5%	CR26,28
2	031019001	DIODE ZEN 1N5245B .5W 15V 5%	CR1,2
2	028119	DIODE ZEN 1N5353V 16V 5W 5%	CR13,14
18	025802	FSTN TAB MALE .250X.032 PCB MT	CP1-16,18-20
2	016795	IC DUAL OP AMP TLO72	U1,2
1	031611	IC DUAL OP AMP PC4560	U3
1	031570	JACK PHONE PCB STEREO PREMIUM	J4 POWER AMP IN
4	037036	JACK PHONE PCB MONO CA PREMIUM	J1,2,3,5 INPUTS, PREOUT, FTSW
60	020888	JUMPER WIRE 22GA	
1	033177	LED RED/GREEN 5X5mm BI-COLOR	LD1
2	031901	PIN MALE PCB .093 DIA	SP1,2
2	036613	RELAY DPDT DIP 24 VOLT 8.3mA	K1,2
1	024937001	RES CF 1/4 W 5% 10 OHM	R63
3	024947001	RES CF 1/4 W 5% 47OHM	R34,99,100
1	028015001	RES CF 1/4 W 5% 130 OHM	R84
2	024957001	RES CF 1/4 W 5% 270 OHM	R85,104
1	024961001	RES CF 1/4 W 5% 470 OHM	R55
8	024969001	RES CF 1/4 W 5% 1.5K	R5,10,17,21,31,64,65,103
1	024970001	RES CF 1/4 W 5% 1.8K	R88
4	024972001	RES CF 1/4 W 5% 2.7K	R29,37,49,50
2	024977001	RES CF 1/4 W 5% 4.7K	R33,68
7	024981001	RES CF 1/4 W 5% 10K	R41,46,76,90,91,93,94
3	024988001	RES CF 1/4 W 5% 27K	R86,98,101,
4	024993001	RES CF 1/4 W 5% 47K	R28,45,51,69
3	028990001	RES CF 1/4 W 5% 51K	R47,48,83
2	024995001	RES CF 1/4 W 5% 68K	R1,2
10	024997001	RES CF 1/4 W 5% 100K	R8,20,23,24,25,30,35,43,77,87
2	028955001	RES CF 1/4W 5% 130K	R12,18
2	025058001	RES CF 1/4W 5% 180K	R44,52
7	025059001	RES CF 1/4W 5% 220K	R9,19,36,40,59,60,105
3	025065001	RES CF 1/4W 5% 470K	R38,95,96
9	025069001	RES CF 1/4W 5% 1M	R3,27,32,42,53,54,89,92,102

HOT ROD DEVILLE

PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	026368001	RES CF 1/2W 5% 100OHM	R80,81
1	025115001	RES CF 1/2W 5% 82K	R57
5	025116001	RES CF 1/2W 5% 100K	R4,11,16,22,58
4	025117001	RES CF 1/2W 5% 220K	R70,71,72,73
1	033095001	RES MOX FP 1W 5% 1 OHM	R66
2	036468001	RES MOX FP 1W 470OHM	R62,62
1	036469001	RES MOX FP 1W 5% 4.7K	R74
1	036621001	RES CF 1W 5% 6.8K	R56
1	036470001	RES MOX FP 1W 5% 10K	R75
1	041277	RES CF 2W 5% 820 OHM	R97
2	028037	RES WW BT 5W 10% 330 OHM	R78,79
4	014999	SCRW M 6-32X1/4 PHP ZI	@XV4,5
13	039367	SCRW M 6-32X3/8 PHPS SS ITLW	PCB MOUNT
1	036178	SPACER LED .5X.1 BRN	@LD1
13	016440	STNDOFF RND AL 6-32X1X1/4	PCB MOUNT
3	028091	SWITCH PUSH SLFLK SHORT STROKE	S1.2.3
1	028503	THERMISTOR 10 OHM 5A C60-11	TH1
3	029167	TUBE SOCKET 9 PIN PCB MOUNT	XV1.2.3
2	029343	TUBE SOCKET 8 PIN PCB MOUNT	XV4,5
2	014689	XSTR N-CH JFET J111 TO-92	Q4
1	016739	XSTR NPN 2N4401 TO-92	Q4
1	016742	XSTR PNP 2N4403 TO-92	Q3

CHASSIS ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	026038	BUSHING SR .625X.062X37/64 BLK	@ PWR CABLE 100V,120V, AUSTRALIA
1	010401	BUSHING SR .625X.125X37/64 WHT	@PWR CABLE 230V, UNITED KINGDOM
1	026116	BUSHING SR .500X.063X7/16 BLK	
1	026541	CABLE ASSY PWR W/.250 TAB 120V	
1	048463	CABLE ASSY PWR .250 TAB 100V	(POWER CABLE 100V ONLY)
1	033331	CABLE ASSY PWR 220/240V	(POWER CABLE 230V ONLY)
1	038602	CABLE ASSY PWR AUST. .250 TAB	(PWR CABLE AUSTRALIA 240V)
1	040993	CABLE ASSY PWR 5A U.K. .250 TAB	(P CABLE UNTIED KINGDOM 240V)
1	022707	CHOKE FILTER	L1
1	032219	COLLAR-PILOT LIGHT	
1	077982	FUSE QA 1-1/4X1/4 250V 3A	F1 100V/120V ONLY
1	020793	FUSE QA 20mmX5mm 250V 1.6A	F1 220V/230V/240V ONLY
1	036702	FUSE HOLDER 3AG FINGER GRIP	100/120V ONLY
1	036703	FUSE HOLDER 5MM FINGER GRIP	230V, AUSTRALIA, UK
1	021741	HOLDER DIAL LITE ASSEMBLY PILOT	
1	021550	JACK PHONE TIP SHUNT 12A	J7 SPEAKER OUT JACK
1	041701	JACK PHONE TRANSFER 13A	J6 EXT. SPEAKER JACK
1	025718	JEWEL PILOT LITE RED #20	
8	036620	KNOB "CHICKEN HEAD	
1	031625	NUT HOLDER PILOT LITE 1/16-27	
8	022004	NUT KEPS #8-32 ZINC	
2	016352	NUT HEX 3/8-32X3/32 TK NI	
1	050403	PANEL TOP CHR M H/R DVL/DLX	
1	021842	PILOT LIGHT #T47	BULB
21	031184	SCRW M 8-32X1/2 PHP ZI	
4	038900	SCRW TF 6-32X1/4 PHP ZI	
4	016473	SCRW M 8-32X1/2 PHP ZI	
6	016440	STNDOFF RND AL 6-32X1X1/4	
1	036570	SWITCH TOGGLE DPST W/NUTS	S4 POWER SWITCH
1	037039	SWITCH TOGGLE SPST W/NUTS	S5 STANDBY SWITCH
3	013341	TUBE 7025/12AX7WAWA RUSSIAN MADE	V1,2,3
2	039214	TUBE 5881/6L6WGC	V4,5
2	020424	TUBE RING UNIVERSAL (277H-2)	@V4,5
7	9904300920	WASHER FLAT .482X.709 NI	
2	9904300100	WASHER LCK INTL 3/8X.709 NI	
1	041752	XFMR PWR CNCRT/SUPR/HR/DVL 120	T2 120V ONLY
1	041753	XFMR PWR '93 CONCERT/SUPER EXP	T2 100V/115V/230V
1	041754	XFMR OUTPUT '93 CONCERT/SUPR	T1

HOT ROD DEVILLE CABINET ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	050678	CAB ASSY HR DVL 140 BLK/SLVR	
1	050676	CAB ASSY HR DVL 212 BLK/SLVR	
1	038566	CABLE ASSY SPKR RT ANG 13-1/2"	SPEAKER CABLE
1	012582	CLAMP CABLE NYL SCRW MNT 1/4	
.38	037788	CLOTH GRILLE BLACK/SILVER	
4	024653	GLIDE CABINET NICKEL PLATED	
1	049094	HANDLE MOLDED BLACK	
4	022483	INSERT GLIDE CUSHION 1.02 DIA.	
6	069393	NUT 6-32 HEX EXT LOCK	GRILLE/BAFFLE MOUNT
4	064162	NUT 8-32X1/2 STR 3 PRNG BLX	HANDLE MOUNT
4	021972	NUT T 10-32X3/4 STR 3 PRNG BLX	SPEAKER MOUNT
4	036650	PIN ESCUTCHEON # 18X3/8 MO	LOGO MOUNT
1	031849	REVERB BAG	BAG ONLY
1	050394	REVERB UNIT 4 SPRING 4EB3C1B	PAN
5	050858	SCRW M 6-32X1-3/4 THP ITFW NI	
4	037247	SCRW M 8-32X1 OHP NI	
4	026625	SCRW WOOD 8X1 FH	GLIDE MOUNT
4	047821	SCRW M 10-32X3/4 THP STL BLX	SPEAKER MOUNT
6	015990	SCRW M 10-32X3/4 THP NI	BACK BOARD MOUNT
6	036619	SCREW M 10-32X1-1/2 THP NI	CHASSIS MOUNT
4	048832	SPEAKER 10" 8 OHM CERAMIC	DEVILLE 410 ONLY
2	037617	SPEAKER 12" 8 OHM 50 WATTS	DEVILLE 212 ONLY
6	022327	WSHR FLAT 8X7/16 NI	

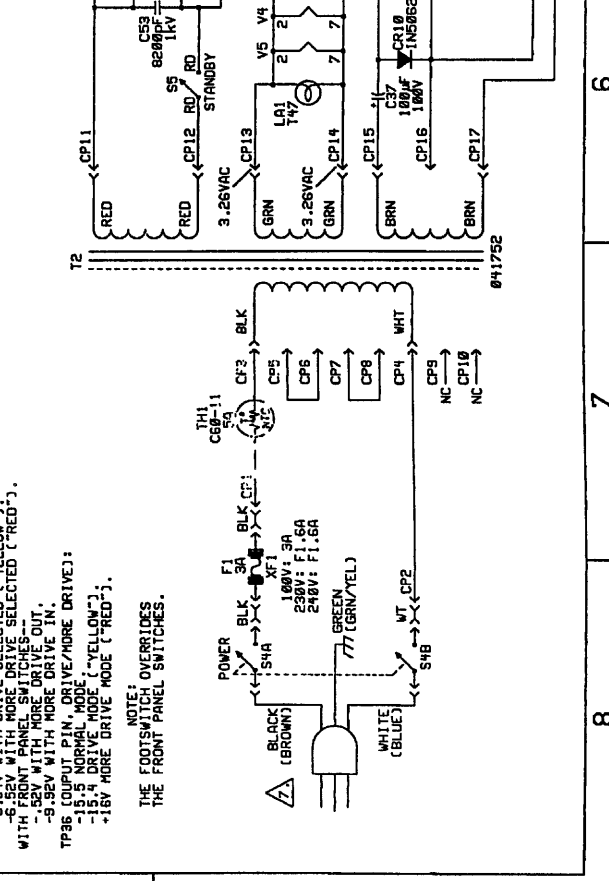
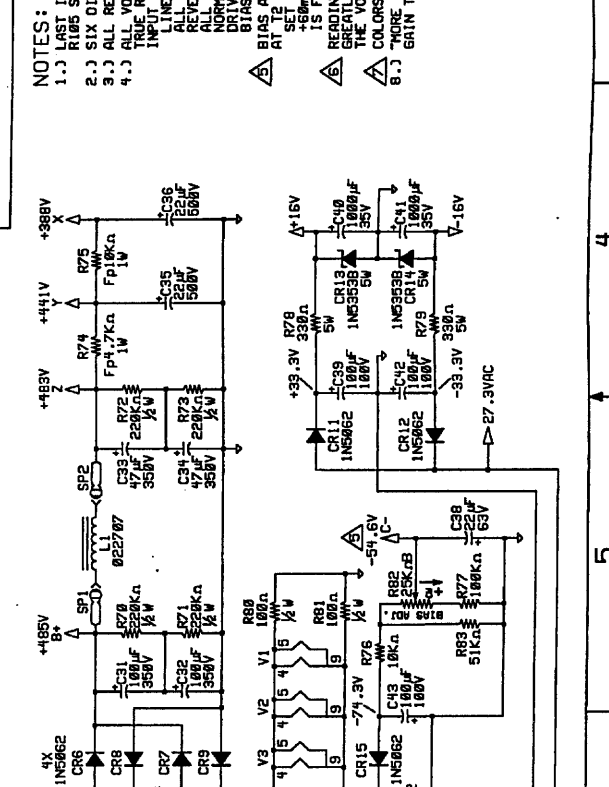
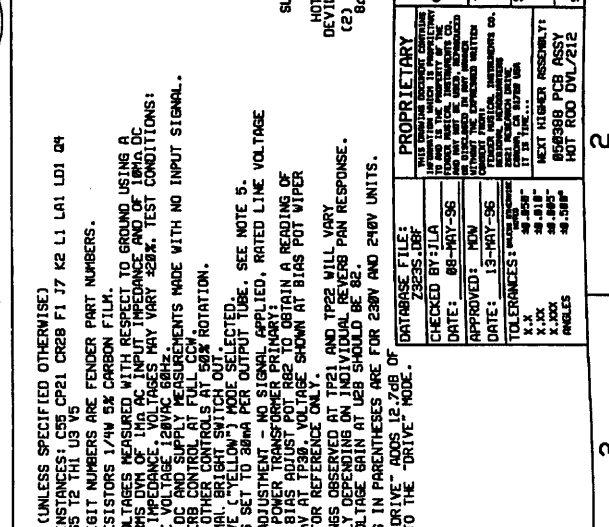
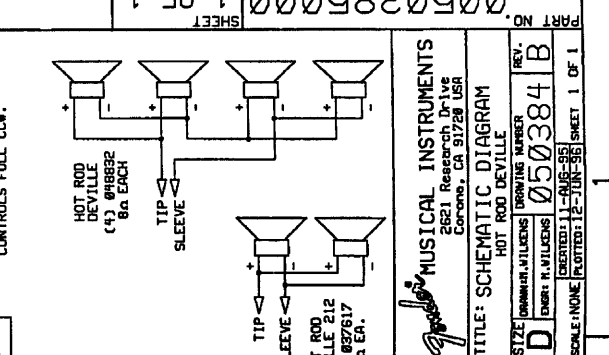
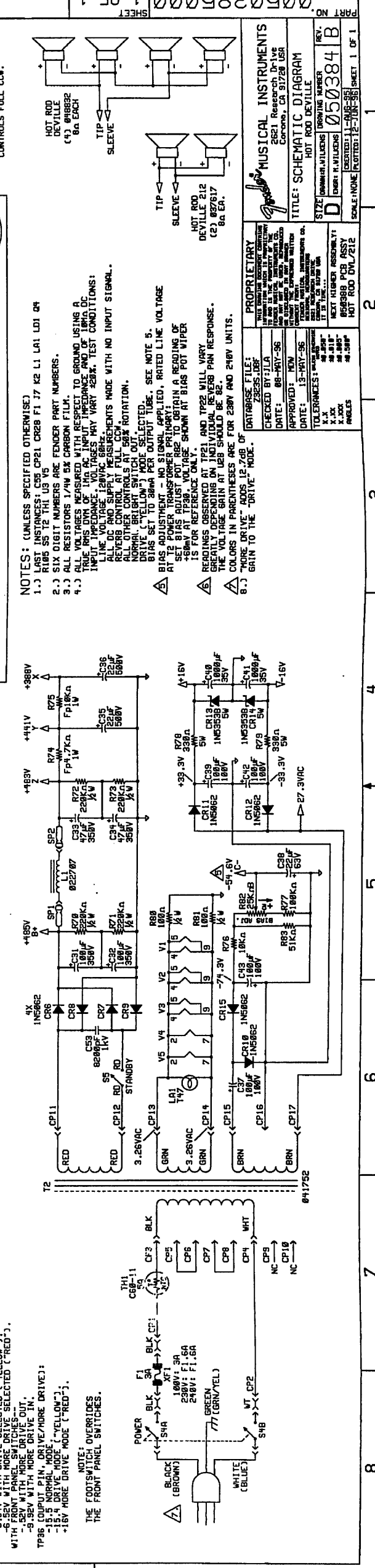
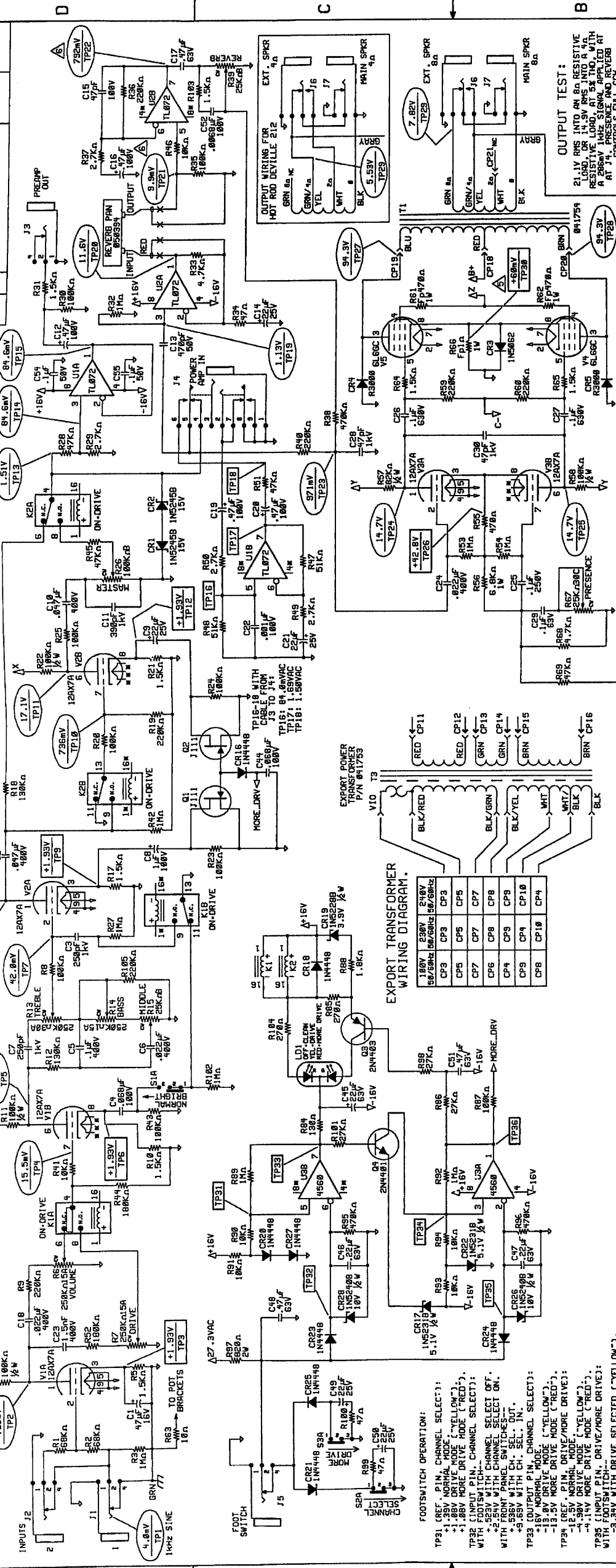
FOOTSWITCH ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	050419	FOOTSWITCH 2 BTN CH/DRV/MDRV	COMPLETE FOOTSWITCH
4	006260	DIODE 1N4448/1N914B SIGNAL	CR1,2,4,5
1	027329	DIODE ZEN 1N5228B 3.9V .5W 5%	CR3
1	031871	LED BI-COLOR 5X5mm	LD2
1	028039	LED RED 5X5mm SLB-55VR3	LD1
1	037036	JACK PHONE PCB MONO CA PREMIUM	J1
1	029687	RES CF 14W 5% 75 OHM	R1
2	028714	SWITCH PUSH SPDT	S1,2

MISCELLANEOUS

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	050697	COVER HOT ROD DEVILLE BLK	
1	050698	COVER HOT ROD DEVILLE 212 BLK	
	050393	MANUAL OWNERS H/R DEVILLE	
	050385	SCHEMATIC REDUCED W/SD H/R DVL	

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED PR323	19-MAY-56	MDW
	B	EC 1701	24-MAY-56	MDW



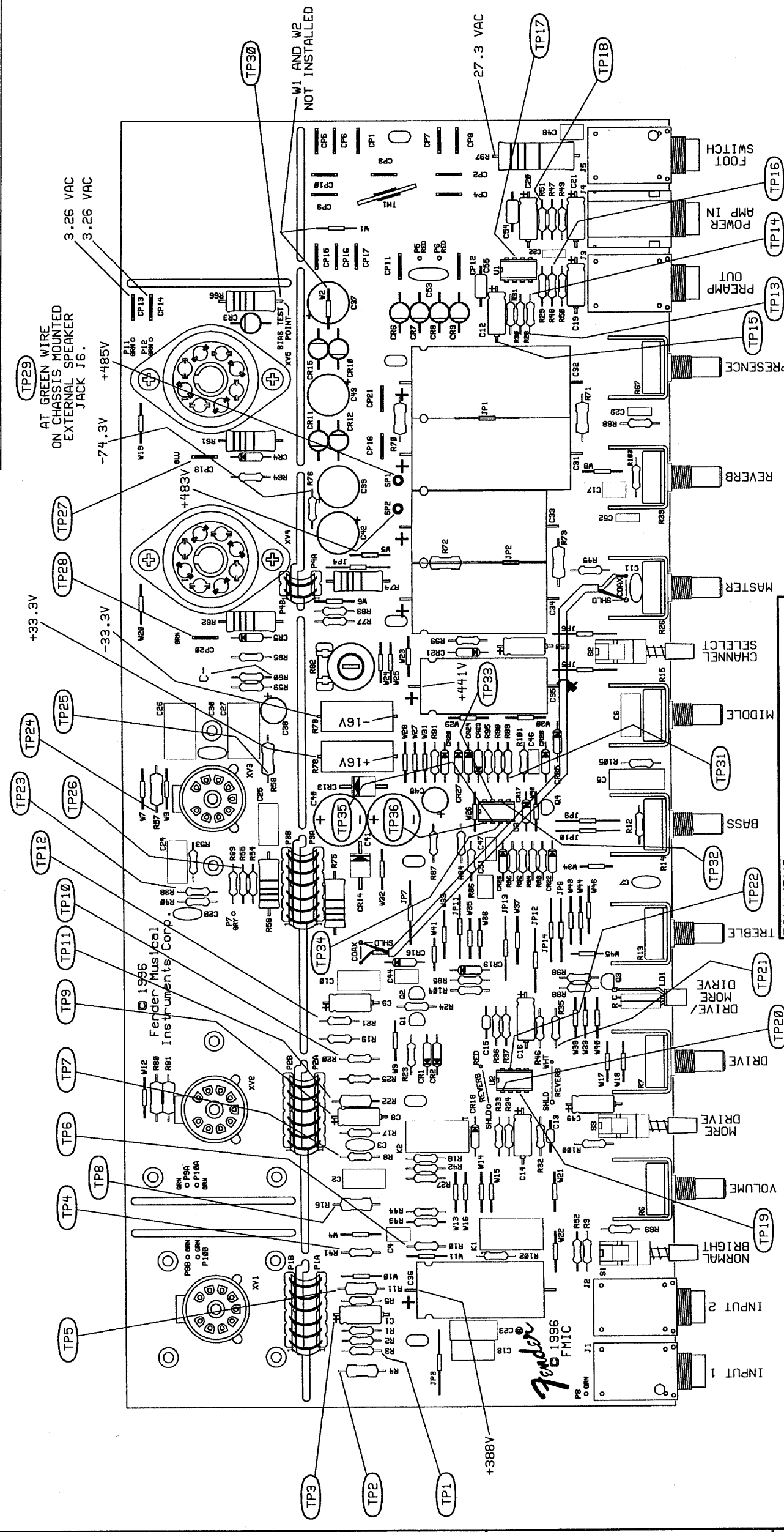
FOOTSWITCH OPERATION:
 TP31 (REF PIN, CHANNEL SELECT):
 +1.88V NORMAL MODE ("YELLOW").
 +1.88V DRIVE MODE ("RED").
 TP32 (INPUT PIN, CHANNEL SELECT):
 WITH FOOTSWITCH--
 +2.6V WITH CHANNEL SELECT OFF.
 WITH FRONT PANEL SWITCHES--
 +.55V WITH CH. SEL. IN.
 TP33 (OUTPUT PIN, CHANNEL SELECT):
 -1.5V NORMAL MODE ("YELLOW").
 -1.5V DRIVE MODE ("RED").
 TP34 (REF. PIN, DRIVE/MORE DRIVE):
 -1.25V NORMAL MODE ("YELLOW").
 -1.88V DRIVE MODE ("RED").
 -1.14V MORE DRIVE ("RED").
 TP35 (INPUT PIN, DRIVE/MORE DRIVE):
 WITH FOOTSWITCH--
 -6.52V WITH MORE DRIVE SELECTED ("RED").
 WITH FRONT PANEL SWITCHES--
 -5.2V WITH MORE DRIVE IN.
 -5.2V WITH MORE DRIVE IN.
 TP36 (OUTPUT PIN, DRIVE/MORE DRIVE):
 -1.5V DRIVE MODE ("YELLOW").
 -1.88V DRIVE MODE ("RED").
 -1.14V MORE DRIVE ("RED").

NOTE: THE FOOTSWITCH OVERLAPPS THE FRONT PANEL SWITCHES.

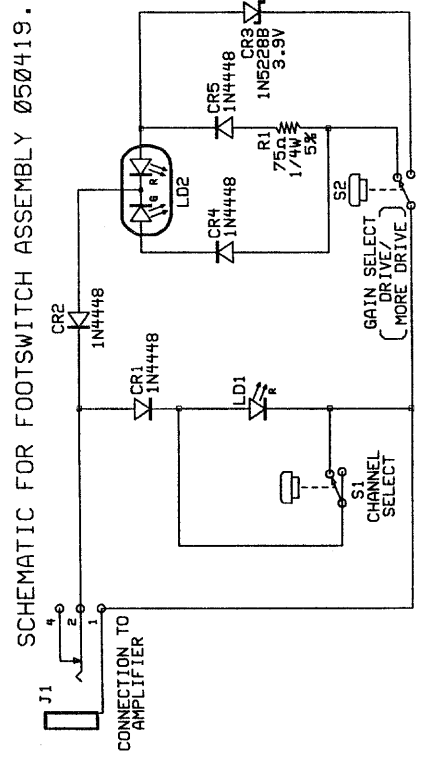
1 2 3 4 5 6 7 8

REVISIONS		DATE	APPROVED
ZONE	DESCRIPTION	13-MAY-96	MDW
A	RELEASED PR323		

NOTES:
1.3 WIRES NOT SHOWN FOR CLARITY.



FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z323P.DBF DATE: 28-APR-96
 LAYERS PLOTTED: 1 2 3 4 18



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 Corona, CA 91720 USA
 IT IS TIME...
 NEXT HIGHER ASSEMBLY:

MUSICAL INSTRUMENTS
 2621 Research Dr. 1vc
 Corona, CA 91720 USA
 TITLE: SERVICE DIAGRAM
 H/R DEVILLE, H/R DEVILLE 212.
 SIZE: C DRAWING: M.WILKENS DRAWING NUMBER: 050386 REV. A
 ENGR: M.WILKENS
 SCALE: NONE PLOTTED: 28-APR-96 SHEET 1 OF 1
 CREATED: 07-MAY-96

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