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**VIBRO-KING® CUSTOM**  
(This is the model name for warranty claims)

p/n 8110000010 (120V)

# SERVICE MANUAL



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February, 2003

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specifications are subject to change without notice. This information and any copies produced electronically or otherwise must be surrendered upon demand of Fender Musical Instruments Corporation.

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

## PARTS LIST CODES

The description codes used in the itemized Parts Lists are defined below:

### 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

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**SPECIFICATIONS**

<b>Model Name:</b>		Vibro-King Custom
<b>Release Number:</b> <i>(Not a model number)</i>		CSR 4
<b>Part Numbers</b>	<b>(120V, 60Hz) US:</b>	811-0000-010
	<b>(100V, 50/60Hz) JPN:</b>	811-0070-010
<b>Power Requirement:</b>		195 W
<b>Power Output:</b>		60 W RMS into 2 ohms
<b>Impedances</b>	<b>Input 1 (Pre-Amp):</b>	1M ohms
	<b>Input 2 (Pre-Amp):</b>	136k ohms
<b>Speaker Complement:</b>		Three 8 ohm, 10 in (25.4 cm) Jensen® reissue P10R (P/N 055613)
<b>Dimensions</b>	<b>Height:</b>	25.5 in ( 64.8 cm)
	<b>Width:</b>	24.75 in ( 62.9 cm)
	<b>Depth:</b>	10.5 in ( 26.7 cm)
<b>Weight:</b>		72 lbs (32.7 kg)

*Product specifications are subject to change without notice*

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### SERVICE NOTES

**1. CHASSIS REMOVAL** is accomplished by first removing the power cord then removing two (2) screws from each side on the top of the cabinet. Disconnect the ¼" speaker plug from the speaker jack and the two RCA plugs from the reverb jacks. Remove two wood screws on

each side of the upper back panel. After removing the upper back panel, slide the chassis toward the rear of the cabinet and out.

### PCB EXCHANGE POLICY

Parts marked with a single asterisk (\*) in the Part Lists are not field replaceable. If a failure due to one of these components is detected, please con-

tact the Fender® Dealer Customer Service Department to order the complete PCB Assembly.



## VIBRO-KING® CUSTOM

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### CIRCUIT DESCRIPTION

This section provides concise information about new or unusual circuitry designs incorporated into this amplifier model. The purpose is to aid the service technician by providing insight into the design areas most likely to become obstacles in troubleshooting. Information is focused for its effective use while maintaining the security of Fender® proprietary information wherever possible.

J1 and J2 are summed by R11 and R12. These 10K resistors are a lower than usual value for a tube amplifier. This value was chosen for two reasons. 10K . is smaller than 33K . or 68K , therefore the amplifier will produce less noise at high volume settings. Secondly, when linking two or more amplifiers a common trick is to plug the guitar into Input 1 and use Input 2 as the output to the next amplifier. With 68K . resistors, 1/10th of the signal is lost with each link. After the input resistors, the signal is split and fed to V1A and V2A. V1A serves as a preamp for the Reverb Drive, or Dwell control. The Dwell control feeds V3, a small power tube which drives the Reverb. V2A is a Cathode-Follower circuit which creates a low impedance, isolated (from the input) signal to drive the Mix control (R2). V2B amplifies the Reverb return (sense) signal and sends it to the Tone control (R3). High frequencies are sent (shunted) to ground via C17. Varying R3 will move the wiper closer to or further from C17, thus making the Reverb brighter (Clockwise) or duller (Counterclockwise). The Reverb signal then sums with the Dry signal at the Mix control (R2). After the Mix control, the signal travels to the Send jack (J3) of the Effects Loop. The signal is then Normaled to the Return jack (J4) and drives V4A. This configuration allows the Reverb functions of the Vibro King to be sent out to other amplifiers (via the Send jack). It also enables a player to insert a delay unit between the reverb and the amplifier for a Rock-A-Billy type effect. A Volume pedal can also be inserted to control the Guitar and the Reverb. The V4A circuit contains the Fat switch (S1). The Fat switch connects C4 to ground to provide a 3dB increase in gain, mostly in the low and mid frequencies. R17 is there to prevent "popping" of the Fat switch when actuated. NOTE: the Fat switch may pop the first time it is switched.

This is due to the warmup/ stabilization cycle of the tube. The Volume control R4A is linked to R4B. R4B reduces the gain of the Reverb at high volume levels. This allows adjustment of the Volume without readjusting the Reverb Mix control. From the Volume control (R4A), the signal is fed to V4B, the Tone control driver section. The signal leaves the tone controls through the Treble control (R5), and is fed to the Vibrato and Phase Inverter circuits. V6B is a low frequency oscillator. The Speed control (R8) varies the oscillation frequency. V6A is the Neon Lamp driver. The lamp flashes faster or slower based on the position of the Speed control (R8). The brightness of the neon bulb is sensed by two LDRs (Light Dependent Resistors) in parallel. The resistors connect to the Intensity control (R9) which varies the amount of attenuation. Because the Vibrato circuit connects to the amplifier directly after the Treble control, the high frequencies will attenuate before the bass frequencies. This simulates a rotating speaker effect. (TROUBLESHOOTING TIP: If the Vibrato does not function, first check the footswitch jack. The switching part of the jack serves to short one side of R57 to ground. If R57 is not grounded, the Vibrato will not operate. If the Vibrato exhibits a clicking sound, the problem is caused by the position of the neon bulb in relation to the LDR's. Adjust the bulb by gently pulling on the leads. Test and repeat as necessary.) The signal then feeds the Phase Inverter (V5), which is a classic style split-load type, used without feedback. The output tubes (5881/6L6WGC) are arranged in a push-pull configuration that will produce sixty (60) watts into two (2) ohms. BIAS PROCEDURE: The bias, measured at pin 5 of V7 or V8 should be set to -46Vdc. However, the Bias need not be measured to be accurately set. To set the Bias without removing the chassis, set the Volume knob between 1-1/2 to 2. (The Bias control is located on the under side of the chassis, next to the power cable.) Adjust the Bias so the amp produces the maximum Hiss. Strum a full chord and let ring. Now, turn the Bias control back just to the point that the sound of the guitar loses warmth and sustain. Then increase it slightly. This will ensure minimum crossover distortion and the best sound.

<b>PARTS LIST:                    MAIN – PCB ASSEMBLY</b>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION



QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0048330000	PCB KIT VIBRO-KING	
1	<del>0080083000</del>	BULB NEON TYPE A2B (USED WITH PHOTO-	
2	0031069001	CAP AE RDL 10uF 100V 20%LL	C23,28
4	0009512000	CAP AE AX 22uF 25V 20%	C4,24,25,41
6	0024819000	CAP AE AX 22uF 500V	C31-35,38 (@ FILTER CAP PC)
2	0026502000	CAP AE AX 100uF 100V	C3,22 (C22 @ PWR SUPPLY PC)
2	0013638000	CAP AE AX 220uf 285V	C29,30 (@ FILTER CAP PC)
1	0031780000	CAP SLVR MICA 150pF 300V	C7
1	0007029001	CAP CD 220pF 1000V 10%LL	C36
1	0020917001	CAP CD 250pF 1000V 10%LL	C16 (@R2-3)
4	0024824000	CAP MPF RDL .01uF 630V 10%	C11,17,(@R3), 38,39
3	0024835000	CAP MPF RDL .022uf 630V 10%	C9,26,27
5	0024846000	CAP MPF RDL .1uF 630V 10%	C2,15,18,12
1	0024861000	CAP MPF RDL .22uF 250V 10%	C5
1	0026202001	CAP PFF RDL .0022uF 600V LL	C1
1	0026204000	CAP PFF RDL .0068uF 600V	C6
1	0033620001	CAP PFF RDL .47uF 100V 10% LL	C10
1	0064089001	DIODE 1N4003 LL	CR5
4	0026730001	DIODE 1N4006 800V LL	CR1-4
2	0029690001	DIODE HV 3KV 200mA LL	CR7,8
2	0038553000	PHOTOCELL CDSE (LDR) (2 PCS IN PARAL- LEL, NO BULB)	
2	0026368001	RES CF 1/2W 5% 100. LL	R62,63
1	9901218221	RES CF 1/2W 5% 820. LL	R27
6	0026549001	RES CF 1/2W 5% 1.5K	R14,20,23,33,34,41
1	0026493001	RES CF 1/2W 5% 2.7K LL	R55
1	0036955001	RES CF 1/2W 5% 6.8K LL	R37
4	0025113001	RES CF 1/2W 5% 10K LL	R11,12 (@INPUT JACKS), 57,59
2	0025832001	RES CF 1/2W 5% 22K LL	R17,61,(@R10 BIAS POT)
1	0041278001	RES CF 1/2W 5% 39K LL	R26
5	0025116001	RES CF 1/2W 5% 100K LL	R24,44,49,56,68
6	0025117001	RES CF 1/2W 5% 220K LL	R31,32,40,48,64,65,73
2	0041279001	RES CF 1/2W 5% 270K LL	R53,54
3	0036957001	RES CF 1/2W 5% 470K LL	R15,21,42
6	9901251021	RES CF 1/2W 5% 1M LL	R13(@INPUT JACKS) R18,25,28,51,52
3	0041280001	RES CF 1/2W 5% 2.2M LL	R45,46,58
1	0037663001	RES CF 1/2W 5% 10M LL	R50
3	0036468001	RES MOX FP 1W 470. LL	R35(@V8), 36(@V7), 60
1	0027352001	RES FILM 1W 5% 91K LL	R29
6	0027353001	RES FILM 1W 5% 100K LL	R16,19,22,30,43,47
1	0036351001	RES FILM 2W 5% 100. LL	R70 (@V3)
1	0041269001	RES CF 2W 5% 1.2K LL	R66 (@ FILTER CAP PC)
1	0041268001	RES CF 2W 5% 10K LL	R67 (@ FILTER CAP PC)
1	0036923000	RES WW 5W 10% 680.	R69
1	0047057000	RES WW BT 5W 25K	R38 (@FILTER CAP PC)
1	0028503000	THERMISTOR 10. 5A C60-11	TH1

\* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

\*\* Safety Requirement part. Replacement must match *Safety Agency...-Value*, if specified –*Type*, if specified –*Approval Mark(s)* if on part.

\*\* Both a unique Fender® part and Safety Requirement part as defined above.



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PARTS LIST:		CHASSIS ASSEMBLY	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0040759000	CHASSIS VIBRO-KING	
1	0018002000	BUSHING SNAP 5/16X17/32 BLK	
1	0021560000	BUSHING SNAP 5/8X27/32 BLK	
1	0026038000	BUSHING SR .625X.062X37/94 BLK	(@ POWER CABLE)
1	0031105000	CABLE ASSY PWR .187+.250 120V	(100/120V ONLY)
1	0036486000	CHOKE	L1
2	0031091000	CLAMP TUBE (277H-1)	(@V7,8)
1	0032219000	COLLAR-PILOT LIGHT	
1	0017502000	CONTROL 10K LIN SCREW ADJ	(BIAS ADJUST)
1	0041264000	CONTROL B5 MEG LIN	R8 (SPEED CONTROL)
6	0041266000	CONTROL DUAL B500K LIN	R1,2,4A/B,5,6,9
2	0041265000	CONTROL DUAL B500K LIN R3 (TONE),	R7 (MID)
1	0036702000	FUSE HOLDER 3AG FINGER GRIP	(100/120V ONLY)
1	0036703000	FUSEHOLDER 5mm FINGER GRIP	(220/230/240V ONLY)
1	0026559000	FUSE TD 1-1/4X1/4 250V 3AMP F1	(100/120V ONLY)
1	0013115000	FUSE TD 20mmX5mm 250V 2AMP	F1 (220/230/240V ONLY)
1	0021741000	HOLDER DIAL LITE ASSEMBLY PILOT	
1	0020773000	INSULATOR DUAL PHONO JACK	(@ REVERB DUAL PHONO JACK)
1	0041469000	INSULATOR FILTERCAP PC	
1	0023760000	JACK PHONE 3/CD DCC 14B	J5 (FOOTSWITCH JACK)
4	0068270000	JACK PHONE TIP SHUNT L12A 3/8L	J1,2,4,7
2	0021626000	JACK PHONE 2/CD SOC L11 3/8"	L J3.6
1	0020772000	JACK PHONO DUAL CHS MT	(REVERB JACK)
1	0025718000	JEWEL #20 PILOT LITE	
9	0041263000	KNOB VINTAGE CREAM	
1	0031625000	NUT HOLDER PILOT LIGHT 1-16/27	
4	0022004000	NUT KEPS #8-32X1/4 PHP BLX	
2	0023580000	SOCKET TUBE 8 PIN	(@V7,8)
2	0032806000	SCRW TF 6-32X1/4 PHP BLX	(GROUND LUG MOUNT)
1	0059857000	PANEL FRONT ALUM VIBRO-KING	
1	0059858000	PANEL REAR ALUM VIBRO-KING	
1	0021642000	PILOT LIGHT	#T47
6	0041267000	SOCKET TUBE 9PIN PORCEL W/SHLD	(@V1-6)
5	0025936000	STANDOFF NYLON PCB SNAPIN 3/8"	
1	0037835000	SWITCH SLIDE SPST SW1	(FAT SWITCH)
2	0036570000	SWITCH TOGGLE DPST W/NUTS S2,3	(POWER/STANDBY)
2	0059778000	TUBE 6L6GC GE CLONE	V7,8
5	0013341000	TUBE VACUUM 7025/12AX7	V1,2,4,5,6
1	0041255000	TUBE VACUUM EL84	V3
8	0022319000	WSHR FLAT 1/4X9/16NI	
3	0022327000	WSHR FLAT 8X7/16 NI	
4	9904300000	100 WSHR LCK INTL 3/8X.681X.032 ZI	(J1,2,6,7)
9	0024049000	WSHR LCK INTL 5/16X.600X.06	ZI
8	0026401000	WSHR SHLDR FIB 3/8X5/8	(FIBER WASHER)
1	0036485000	XFMR OUTPUT T2	(OUTPUT XFMR)
1	0024038000	XFMR OUTPUT 10W SE T3	(REVERB XFMR)
1	0026554000	XFMR PWR MUTI VOLT (100/120/230/240V)	

\* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

\*\* Safety Requirement part. Replacement must match *Safety Agency...*-Value, if specified -Type, if specified -Approval Mark(s) if on part.

\*\* Both a unique Fender® part and Safety Requirement part as defined above.

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PARTS LIST:		<b>CABINET ASSEMBLY</b>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0059852000	CAB ASSY VIBRO KING (COMPLETE CABINET)	
1	0031849000	BAG-REVERB SPRING UNIT	(BAG ONLY)
1	0025722000	CABLE ASSY REVERB 1100mm	
1	0038566000	CABLE ASSY SPKR RT ANG 13-1/2"	(SPEAKER CABLE)
1	0049094000	HANDLE MOLDED BLACK 'DOGBONE'	
2	0024851000	LEG 19" AMP	
1	0047600000	NAMEPLATE FNDR BLACK (994095)	
2	0021998000	NUT FLEX LOCK 10-32 W/NYLON NI	(TILT BACK LEG MOUNT)
1	0064063000	REVERB UNIT 4 SPRING 4AB3C1B	(PAN)
4	0037210000	SCREW SMA 2X3/8 OHP NI	(LOGO MOUNT)
8	0037952000	SCRW SMA #6X1 OHP NI	(BACK BOARD MOUNT)
4	0037247000	SCRW M 8-32X1 OHP NI	(HANDLE MOUNT)
4	0022236000	SCRW M 8-32X3-1/4 OHP NI CONE	(CHASSIS MOUNT)
2	0022277000	SCRW M 10-32X1-1/2 OHP NI	(TILT BACK LEGS MOUNT)
2	0031344000	SCRW SMA 10X3/4 OHP NI	(LEG STOP MOUNT)
2	0024752000	STRAP CHASSIS 4-1/2"	
8	0037215000	WSHR C'SNK #6 NI	(BACKBOARD ASSY MOUNT)
6	0022319000	WSHR FLAT 1/4X9/16 NI	(TILT BACK LEGS MOUNT)
2	0024646000	WASHER LEG STOP TN	
2	0022285000	WSHR SP LCOK 1/4X.493 ZI	(TILT BACK LEG MOUNT)

PARTS LIST:		<b>END ITEM ASSEMBLY</b>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0059898000	MANUAL OWNERS VIBRO KING	
1	0059852000	CABINET ASSY VIBRO-KING	
1	0059893000	CHS ASSY VIBRO-KING CUSTM 120V	
1	0041727000	SCHEM REDUCED VIBRO KING	
5	0022327000	WSHR FLAT 8x7/16 NI	
3	0022491000	CLAMP CABLE NYL SCRW MNT 5/16	
2	0024752000	STRAP CHASSIS 4-1/2" NICKEL	
1	0025722000	CABLE REVERB 1100mm	
6	0029828000	SCRW PB 8x3/4 PHP ZI	
2	0030866000	SCRW SMA 8x1/2 PHP NI	
2	0031344000	SCRW SMA 10x3/4 OHP NI	
1	0031849000	REVERB BAG	
1	0038566000	CABLE ASSY SPKR RT ANG 13-1/2"	
1	0041273000	FTSW 2 BTN VB/FAT (099-4059)	
1	0041528000	WIRE SET FINAL VIBROKING	
1	0041727000	SCHEM REDUCED VIBRO KING	
12	0047821000	SCRW M 10-32 3/4 THP STL BLX	
3	0055613000	SPEAKER 10" 8 OHM JENSEN P10R	(SPEAKER MOUNT)
1	0064063000	REVERB UNIT 4 SPRING 4AB3C1B	
1	9906900590	CLAMP CABLE NYL ADHESIVE	

\* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

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PARTS LIST:		<b>FOOTSWITCH ASSY</b>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0041273000	FTSW ASSY 2 BTTN VIB/FAT	(COMPLETE FOOTSWITCH)
1	0021691000	BUSHING SR .500X.100X7/16 BLK	
1	0022665000	COVER CUP DUAL FTSW ASSY	
1	0013172000	PLUG PHONE 3 CONDUCTOR 238	RA
2	0024042000	SWITCH SPST PUSH BUTTON	S1,2
2	0022293000	WSHR FLAT .473X.750 NI	

\* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

\*\* Safety Requirement part. Replacement must match *Safety Agency*...-Value, if specified -Type, if specified -Approval Mark(s) if on part.

\*\* Both a unique Fender® part and Safety Requirement part as defined above.



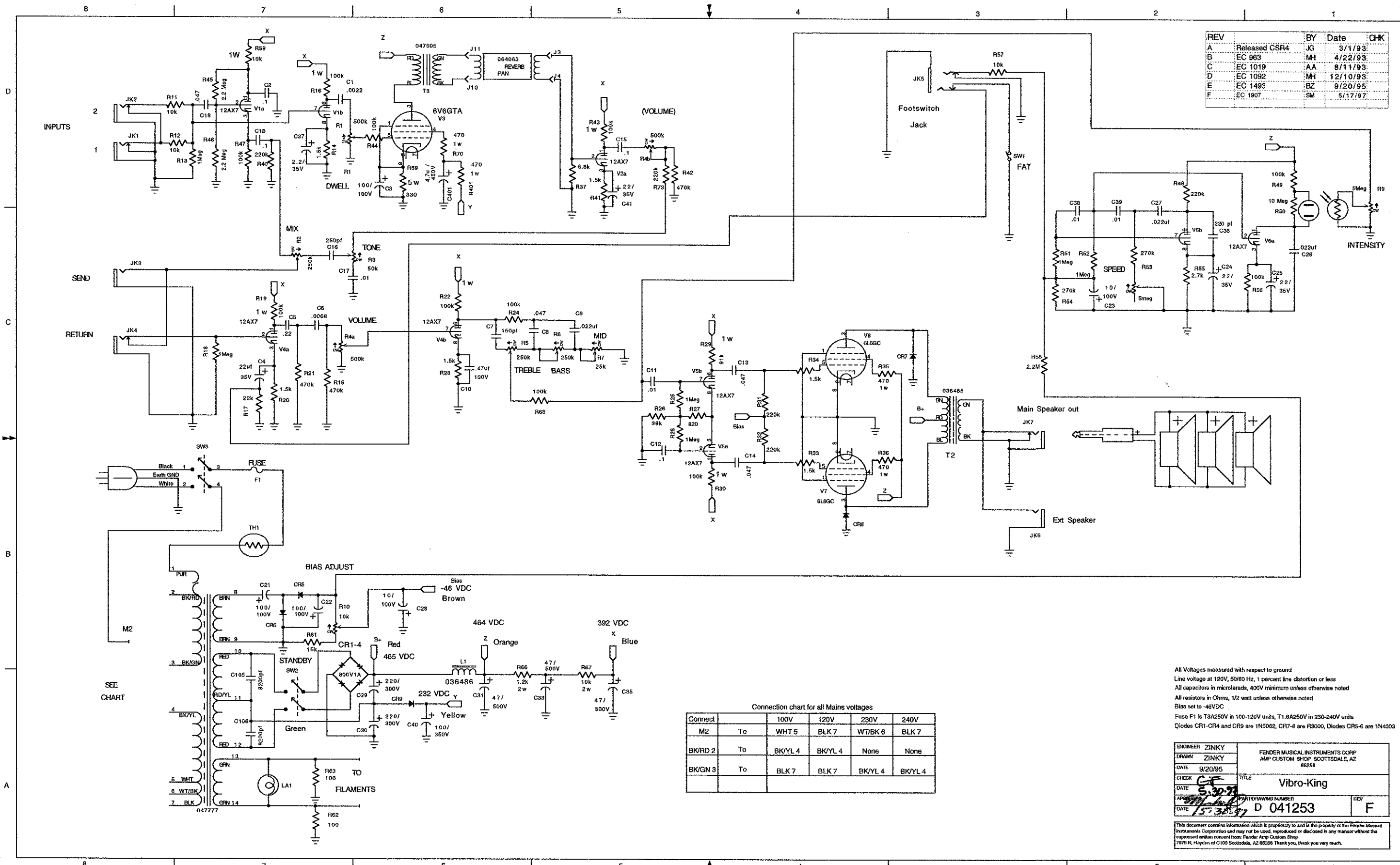
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## Service Diagram List

Schematic ..... Vibro-King





REV	BY	Date	CHK
A	Released CSR4	JG	3/1/93
B	EC 963	MH	4/22/93
C	EC 1019	AA	8/11/93
D	EC 1092	MH	12/10/93
E	EC 1493	BZ	9/20/95
F	EC 1907	SM	5/17/97

Connection chart for all Mains voltages

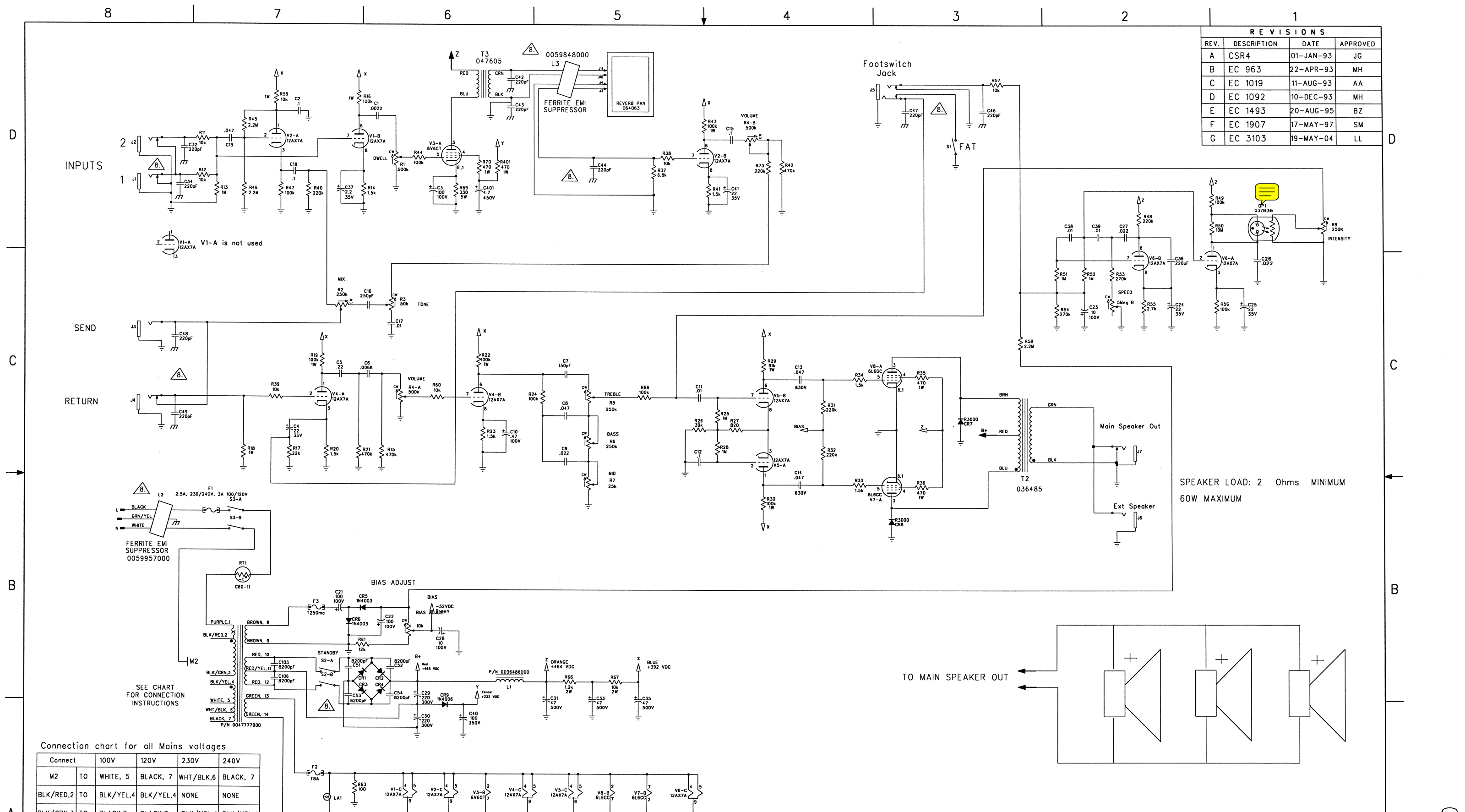
Connect	To	100V	120V	230V	240V
M2	To	WHT 5	BLK 7	WT/BK 6	BLK 7
BK/RD 2	To	BK/YL 4	BK/YL 4	None	None
BK/GN 3	To	BLK 7	BLK 7	BK/YL 4	BK/YL 4

All Voltages measured with respect to ground  
 Line voltage at 120V, 60/60 Hz, 1 percent line distortion or less  
 All capacitors in microfarads, 400V minimum unless otherwise noted  
 All resistors in Ohms, 1/2 watt unless otherwise noted  
 Bias set to -46VDC  
 Fuse F1 is T3A250V in 100-120V units, T1.6A250V in 230-240V units  
 Diodes CR1-CR4 and CR9 are 1N5082, CR7-8 are R3000, Diodes CR5-6 are 1N4003

ENGINEER	ZINKY	FENDER MUSICAL INSTRUMENTS CORP
DRAWN	ZINKY	AMP CUSTOM SHOP SCOTTSDALE, AZ
DATE	9/20/95	85298
CHECK	<i>[Signature]</i>	TITLE
DATE	5-30-97	Vibro-King
DATE	5-30-97	PARTS DRAWING NUMBER
		D 041253
		REV
		F

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 7975 N. Hayden of C100 Scottsdale, AZ 85258 Thank you, thank you very much.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	CSR4	01-JAN-93	JG
B	EC 963	22-APR-93	MH
C	EC 1019	11-AUG-93	AA
D	EC 1092	10-DEC-93	MH
E	EC 1493	20-AUG-95	BZ
F	EC 1907	17-MAY-97	SM
G	EC 3103	19-MAY-04	LL



Connection chart for all Mains voltages

Connect	100V	120V	230V	240V
M2	TO WHITE, 5	TO BLACK, 7	TO WHT/BLK, 6	TO BLACK, 7
BLK/RED, 2	TO BLK/YEL, 4	TO BLK/YEL, 4	NONE	NONE
BLK/GRN, 3	TO BLACK, 7	TO BLACK, 7	TO BLK/YEL, 4	TO BLK/YEL, 4

- NOTES: (UNLESS OTHERWISE NOTED)
- ALL RESISTORS IN OHMS, 5% 1/2W.
  - ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 10% OR BETTER; 400V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20X).
  - BIAS IS SET TO -52 VDC.
  - ALL VOLTAGES MEASURED WITH RESPECT TO GROUND.
  - LINE VOLTAGE AT 120V, 50/60Hz, 1% DISTORTION OR LESS.
  - FUSE F1 IS T3A, 250V IN 100-120V UNITS, F2 5A, 250V IN 230-240V UNITS.
  - DIODES CR1-CR4 AND CR8 ARE IN5062, CR7-CR8 ARE R3000, DIODES CR3-CR6 ARE 1N4003.
  - DIODES CR1-CR4 AND CR8 ARE IN5062, CR7-CR8 ARE R3000, DIODES CR3-CR6 ARE 1N4003.
  - THE FOLLOWING COMPONENTS ARE INSTALLED ON 230/240V UNITS ONLY. L2, L3, C33, 34, C42-44, C46-49, C51-54.

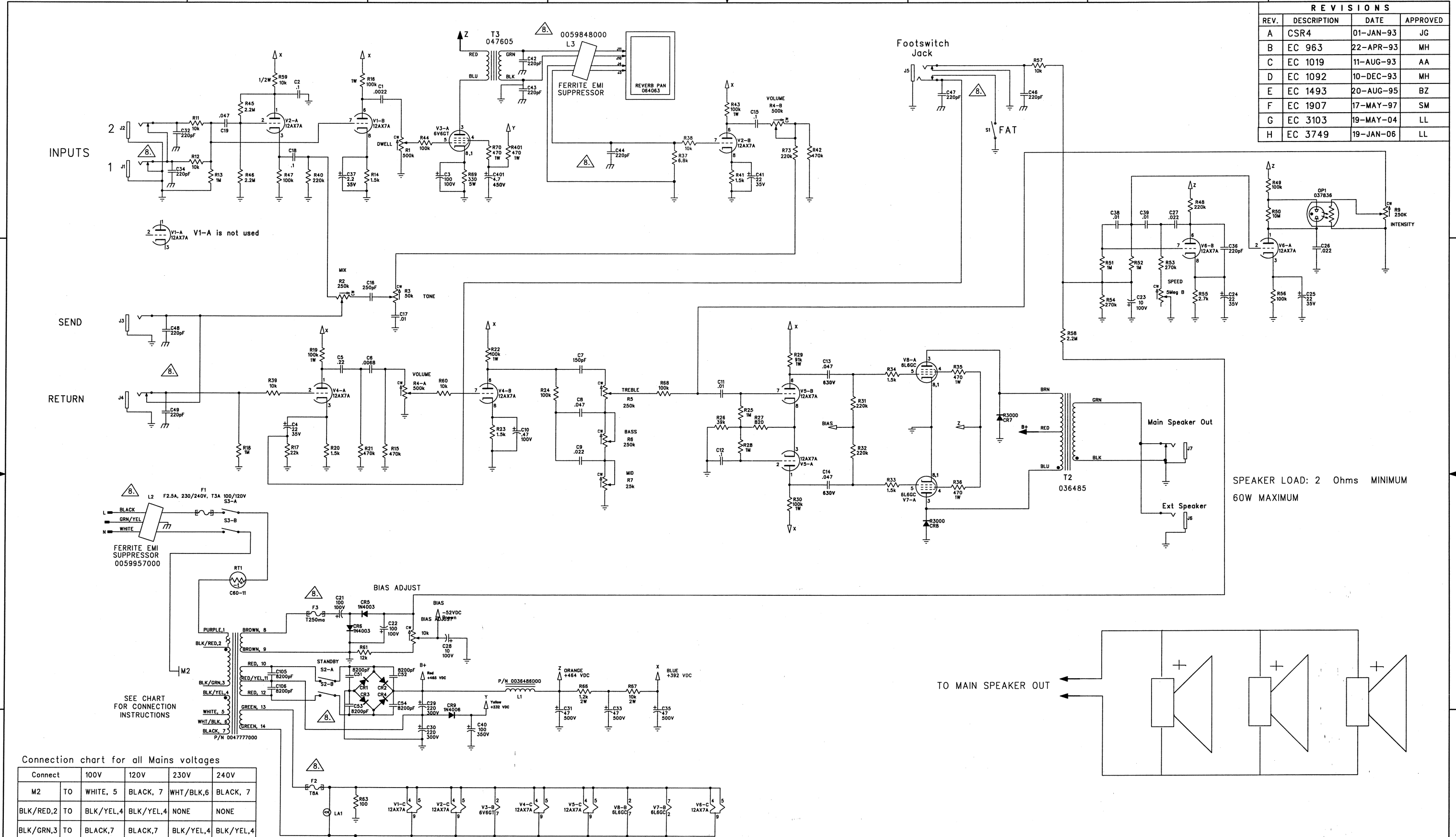
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Corona, CA U.S.A.

CHECKED BY: *[Signature]* TITLE: SCHEMATIC, VIBRO-KING  
DATE: 7/19/04  
APPROVED BY: *[Signature]* SIZE: D DRAWING NUMBER: 0041253000 REV. G  
DRAWN: KOTHRADE/ENGR: LORENZEN  
DATABASE FILE: ZCSR45.SCH  
RELEASE DATE: 19-JUL-04 SHEET: 1 OF 1

0041727000

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	CSR4	01-JAN-93	JG
B	EC 963	22-APR-93	MH
C	EC 1019	11-AUG-93	AA
D	EC 1092	10-DEC-93	MH
E	EC 1493	20-AUG-95	BZ
F	EC 1907	17-MAY-97	SM
G	EC 3103	19-MAY-04	LL
H	EC 3749	19-JAN-06	LL



SEE CHART FOR CONNECTION INSTRUCTIONS

Connection chart for all Mains voltages

Connect	100V	120V	230V	240V
M2	TO WHITE, 5	BLACK, 7	WHT/BLK, 6	BLACK, 7
BLK/RED, 2	TO BLK/YEL, 4	BLK/YEL, 4	NONE	NONE
BLK/GRN, 3	TO BLACK, 7	BLACK, 7	BLK/YEL, 4	BLK/YEL, 4

- THE FOLLOWING COMPONENTS ARE INSTALLED ON 230/240V UNITS ONLY.
- L2, L3, C32, 34, C42-44, C46-48, C51-54, F2-3
  - DIODES CR1-CR4 AND CR8 ARE 1N5062, CR7-CR8 ARE R3000, DIODES CR5-CR6 ARE 1N4003
  - FUSE F1 IS T3A, 250V IN 100-120V UNITS, F2.5A, 250V IN 230-240V UNITS
  - LINE VOLTAGE AT 120V, 50/60Hz, 1% DISTORTION OR LESS
  - ALL VOLTAGES MEASURED WITH RESPECT TO GROUND
  - BIAS IS SET TO -52 VDC.
  - ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 10% OR BETTER; 400V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
  - ALL RESISTORS IN OHMS, 5%; 1/2W.
- NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.

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

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

APPROVED BY: \_\_\_\_\_ DATE: 2/27/06

DRAWN: KOTHRAD E ENGR: LORENZEN  
DATABASE FILE: ZCSR4S.SCH

TITLE: SCHEMATIC, VIBRO-KING

SIZE: D DRAWING NUMBER: 0041253000

REV. H

RELEASE DATE: 19-JUL-04 SHEET: 1 OF 1

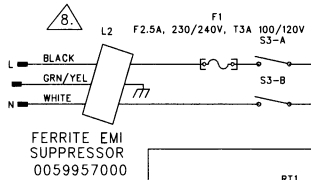
0041727000

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
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F	EC 1907	17-MAY-97	SM
G	EC 3103	19-MAY-04	LL
H	EC 3749	19-JAN-06	LL
J	EC 3721	31-JAN-08	LL

INPUTS

SEND

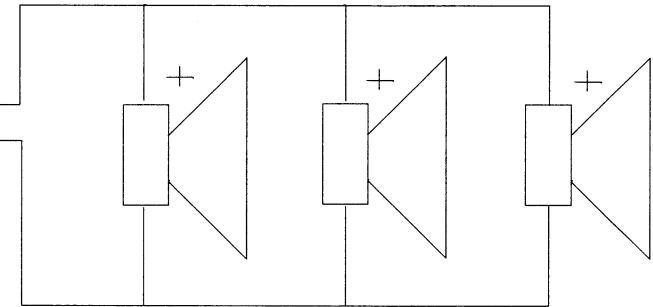
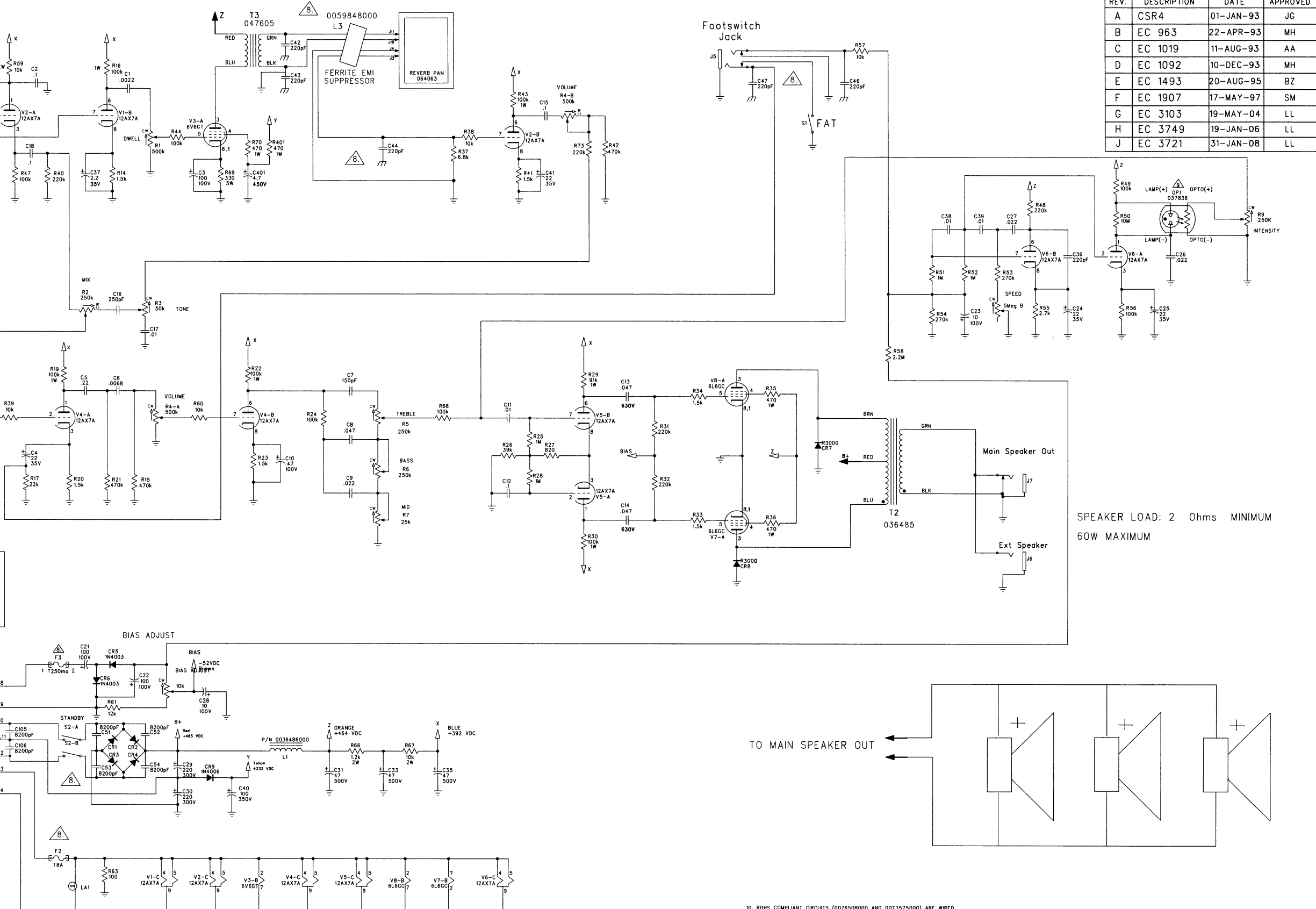
RETURN



SEE CHART FOR CONNECTION INSTRUCTIONS

Connection chart for all Mains voltages

Connect	100V	120V	230V	240V
M2	TO WHITE, 5	BLACK, 7	WHT/BLK, 6	BLACK, 7
BLK/RED, 2	TO BLK/YEL, 4	BLK/YEL, 4	NONE	NONE
BLK/GRN, 3	TO BLACK, 7	BLACK, 7	BLK/YEL, 4	BLK/YEL, 4



SPEAKER LOAD: 2 Ohms MINIMUM  
60W MAXIMUM

TO MAIN SPEAKER OUT

- 10. ROHS COMPLIANT CIRCUITS (0076508000 AND 0073575000) ARE WIRED IN PLACE OF OPTI FOR 230V EUR/UK UNITS. SEE WIRE SET 0076634000.
  - OPTI IS NOT INSTALLED IN 230V UK/EUR UNITS.
  - 11. THE FOLLOWING COMPONENTS ARE INSTALLED ON 230/240V UNITS ONLY:  
L2, L3, C32,34, C42-44, C46-49, C51-54, F2-3
  - 12. DIODES CR1-CR4 AND CR5 ARE IN50B2, CR7-CR8 ARE R3000, DIODES CR5-CR8 ARE IN4003
  - 13. FUSE F1 IS T3A, 250V IN 100-120V UNITS, F2.5A, 250V IN 230-240V UNITS
  - 14. LINE VOLTAGE AT 120V,50/60Hz, 1% DISTORTION OR LESS
  - 15. ALL VOLTAGES MEASURED WITH RESPECT TO GROUND
  - 16. BIAS IS SET TO -52 VDC.
  - 17. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 10X OR BETTER; 400V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20X)
  - 18. ALL RESISTORS IN OHMS, 5%, 1/2W.
- NOTES: (UNLESS OTHERWISE NOTED)

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

CHECKED BY: *[Signature]*  
DATE: 31-01-08

APPROVED BY: *[Signature]*  
DATE: 2/1/08

DRAWN: KOTHRADEN ENGR: LORENZEN  
DATABASE FILE: D041253.SCH

TITLE: SCHEMATIC, VIBRO-KING

SIZE: D  
DRAWING NUMBER: 0041253000  
REV. J

RELEASE DATE: 19-JUL-04 SHEET: 1 OF 1

0041727000



**VIBRO KING®**  
**20<sup>th</sup> ANNIVERSARY EDITION**  
(This is the model name for warranty claims)

# **SERVICE MANUAL**

# **SUPPLEMENT**

**Reason For Supplement:** Name Changing to: Vibro-King 20<sup>th</sup> Anniversary Edition from: Vibro King Custom. Reverb improvements and improved manufacturability require changes to the circuitry and to the parts list. This new version is easily identified by the 20<sup>th</sup> Anniversary Edition imprint on the front panel. This supplement contains a parts list and schematic for the new circuitry. Please file and use it in conjunction with your original Vibro-King® Custom Service Manual.



**VIBRO KING®**  
**20<sup>th</sup> ANNIVERSARY EDITION**  
 (This is the model name for warranty claims)

## IMPORTANT NOTICE

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specifications are subject to change without notice. This information and any copies produced electronically or otherwise must be surrendered upon demand of Fender Musical Instruments Corporation.

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

## PARTS LIST CODES

The description codes used in the itemized Parts Lists are defined below:

### CAPACITOR CODES

CAP AE = Aluminum Electrolytic  
 CAP CA = Ceramic Axial  
 CAP CD = Ceramic Disk  
 CAP CR = Ceramic Radial  
 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 MOX = Metal Oxide  
 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



**VIBRO KING®**  
**20<sup>th</sup> ANNIVERSARY EDITION**  
 (This is the model name for warranty claims)

## SPECIFICATIONS

**Model Name:** Vibro-King 20<sup>th</sup> Anniversary Edition

**Release Number:** CSR 4  
 (Not a model number)

### PART NUMBERS

<b>BLACK</b>	<b>BLONDE</b>	<b>BROWN</b>
811000020 VK 20 <sup>th</sup> ANV 120V DOM	811000420 VK 20 <sup>th</sup> ANV 120V DOM	811000520 VK 20 <sup>th</sup> ANV 120V DOM
8110001020 VK 20 <sup>th</sup> ANV 110V TW	8110001420 VK 20 <sup>th</sup> ANV 110V TW	8110001520 VK 20 <sup>th</sup> ANV 110V TW
8110003020 VK 20 <sup>th</sup> ANV 240V AU	8110003420 VK 20 <sup>th</sup> ANV 240V AU	8110003520 VK 20 <sup>th</sup> ANV 240V AU
8110004020 VK 20 <sup>th</sup> ANV 230V UK	8110004420 VK 20 <sup>th</sup> ANV 230V UK	8110004520 VK 20 <sup>th</sup> ANV 230V UK
8110005020 VK 20 <sup>th</sup> ANV 220V ARG	8110005420 VK 20 <sup>th</sup> ANV 220V ARG	8110005520 VK 20 <sup>th</sup> ANV 220V ARG
8110006020 VK 20 <sup>th</sup> ANV 230V EU	8110006420 VK 20 <sup>th</sup> ANV 230V EU	8110006520 VK 20 <sup>th</sup> ANV 230V EU
8110007020 VK 20 <sup>th</sup> ANV 100V JP	8110007420 VK 20 <sup>th</sup> ANV 100V JP	8110007520 VK 20 <sup>th</sup> ANV 100V JP
8110008020 VK 20 <sup>th</sup> ANV 220V CN	8110008420 VK 20 <sup>th</sup> ANV 220V CN	8110008520 VK 20 <sup>th</sup> ANV 220V CN
8110009020 VK 20 <sup>th</sup> ANV 220V ROK	8110009420 VK 20 <sup>th</sup> ANV 220V ROK	8110009520 VK 20 <sup>th</sup> ANV 220V ROK
8110013020 VK 20 <sup>th</sup> ANV 240V MA	8110013420 VK 20 <sup>th</sup> ANV 240V MA	8110013520 VK 20 <sup>th</sup> ANV 240V MA

**Power Requirement:** 195W

**Power Output:** 60 W RMS into 2 Ohms

**Impedances**

<b>Input 1 (Pre-Amp):</b>	1 Meg Ohms
<b>Input 2 (Pre-Amp):</b>	136K Ohms

**Dimensions**

<b>Height:</b>	25.5 in (64.8 cm)
<b>Width:</b>	24.75 in (62.9 cm)
<b>Depth:</b>	10.5 in (26.7 cm)

**Weight:** 72 lbs (37.65 kg)

*Product specifications are subject to change without notice*



**VIBRO KING®**  
**20<sup>th</sup> ANNIVERSARY EDITION**  
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PARTS LIST:		<b>PCB ASSEMBLY</b>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
9	0051406000	CAP CD 220Pf 500V	C32, C34, C42-44, C46-49 Chassis Assy
1	0026058000	CAP MICA 820pF	C1 – PCB ASSY
1	0068330000	**FUSE PIGTAIL T250mA	F3
1	0990943000	HANDLE MLD BLK	Black Cabinet Variant
1	0036784000	HANDLE POLYPROP VINTAGE BROWN	Brown & Blonde Cabinet Assemblies
9	0036678000	KNOB VINTAGE DARK BROWN 0990934	Brown & Blonde Cabinet Variants
1	0096416000	REVERB UNIT 4 SPG MOD-4AB3C1B	REVERB PAN
3	0024981001	RES CF 10K ¼ WATT	R11-12. R27 - @ CHS ASSY
1	0027871001	RES CF 1K ½ WATT	R73
1	0053869001	RES CF 1/2W 1M 5%	R101
1	0041256000	RES WW 470 OHM 5 WATT	R69
3	<del>0095354000</del>	SPKR SPL DSN 10" 8 OHM JENSEN P10R-F	SPEAKER
1	0095106000	*PANEL FRONT VIBRO KING 20 <sup>TH</sup> BLK	Black Cabinet Variant
1	0095107000	*PANEL FRONT VIBRO-KING 20TH BRN	Brown & Blonde Variants
1	0095105000	*CAB ASSY VIBRO KING BRN/PINE	BROWN VARIANT CABINET
1	0095104000	*CAB ASSY VIBRO-KING (BLONDE)	BLONDE VARIANT CABINET
1	0059957000	**FERRITE CORE 225 OHM	CHS ASSY
1	0068329000	**FUSE PIGTAIL T8A	CHS ASSY
4	0025995000	**CAP CD 8200pF 100V	C51-54 @ POWER PCB ASSY
2	0012869000	**LUG SOLDER BRONZE TINNED	@ CHS ASSY
2	0057161000	**BOOT TOGGLE SWITCH GREY .844 H	@ FINAL ASSY
1	0059848000	**FERRITE CORE 80 OHM	@ CHS ASSY
1	0028915000	PLUG PHONE RTANG SHIELDED	P/O FINAL WIRESET FOR SPEAKER CABLE

Correct Material Number for the speaker in this 20th Anniv.  
 Edition is **0095254000**  
 (DW - 07/25/2014)

\* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY section above.

*shaded* Unique Fender® part. Order directly from the FMIC Parts Department.

*shaded +* \* Access to this part or assembly is controlled. Please contact the FMIC Customer Service Department.

\*\* Safety Requirement part. Replacement must match Safety Agency...–Value, if specified –Type, if specified –Approval Mark(s) if on part.

*shaded +* \*\* Both a unique Fender® part and a Safety Requirement part as defined above.

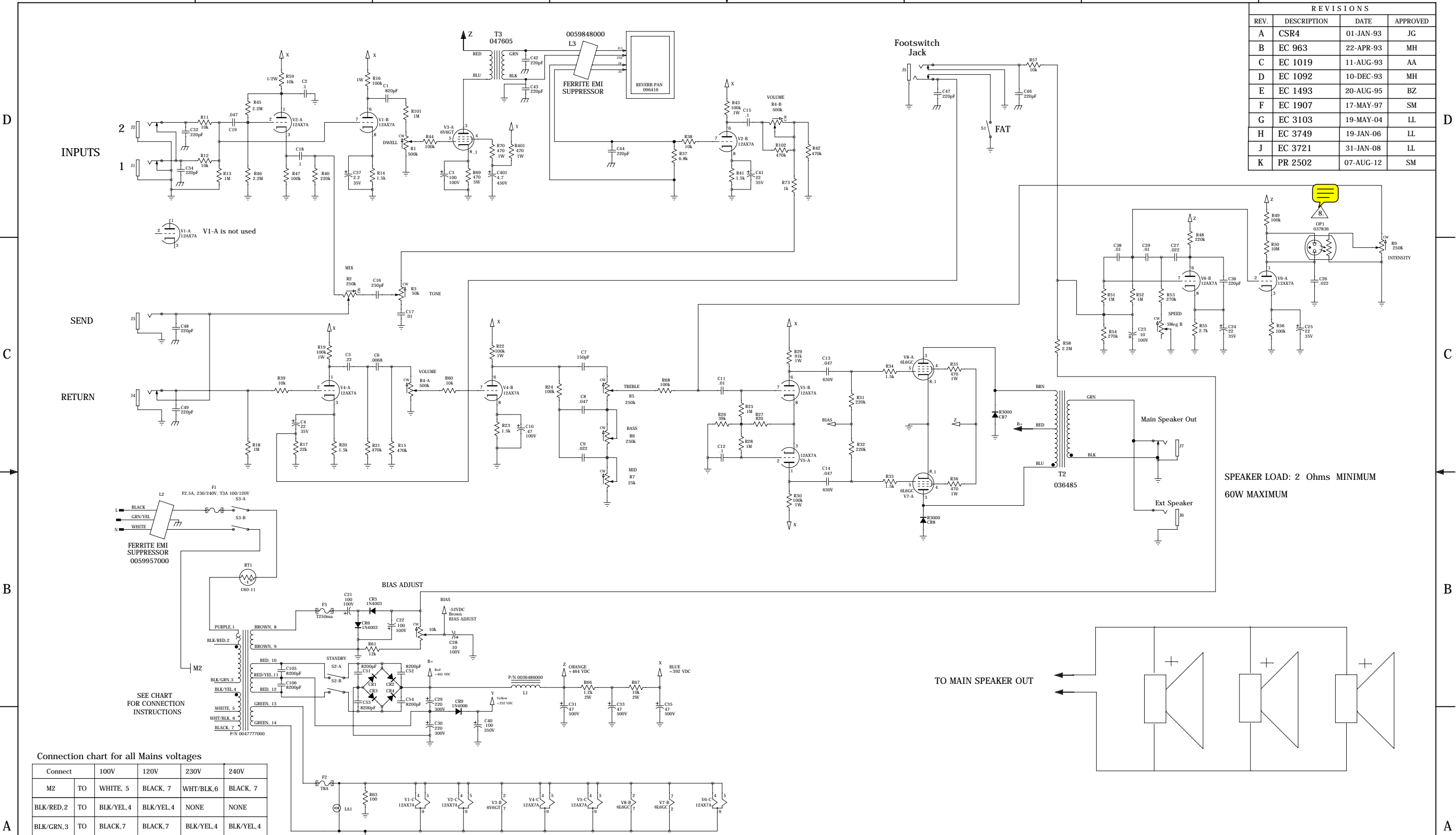
The Fender logo is written in its signature script font, featuring a stylized 'F' and a registered trademark symbol.

**VIBRO KING®**  
**20<sup>th</sup> ANNIVERSARY EDITION**  
(This is the model name for warranty claims)

## **Service Diagram List**

Service Diagram (Schematic).....Vibro King 20<sup>th</sup> Anniversary Edition

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	CSR4	01-JAN-93	JG
B	EC 963	22-APR-93	MH
C	EC 1019	11-AUG-93	AA
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E	EC 1493	20-AUG-95	BZ
F	EC 1907	17-MAY-97	SM
G	EC 3103	19-MAY-04	LL
H	EC 3749	19-JAN-06	LL
J	EC 3721	31-JAN-08	LL
K	PR 2502	07-AUG-12	SM



Connection chart for all Mains voltages

Connect	100V	120V	230V	240V
M2	TO WHITE, 5	BLACK, 7	WHT/BLK, 6	BLACK, 7
BLK/RED, 2	TO BLK/YEL, 4	BLK/YEL, 4	NONE	NONE
BLK/GRN, 3	TO BLACK, 7	BLACK, 7	BLK/YEL, 4	BLK/YEL, 4

- ROHS COMPLIANT CIRCUITS (0078508000 AND 0073575000) ARE WIRED IN PLACE OF OP1 FOR 230V EUR/UK UNITS. SEE WIRE SET 0076934000.
  - OP1 IS NOT INSTALLED IN 230V UK/EUR UNITS.
  - DIODES CR1-CR4 AND CR9 ARE 1N4006. CR7-CR8 ARE R3000. DIODES CR5-CR6 ARE 1N4003.
  - FUSE F1 IS T3A, 250V IN 100-120V UNITS. F2 SA, 250V IN 230-240V UNITS.
  - LINE VOLTAGE AT 120V/50/60Hz, 1% DISTORTION OR LESS.
  - ALL VOLTAGES MEASURED WITH RESPECT TO GROUND.
  - BIAS IS SET TO 40mA PER 6L6 (V7 & V8).
  - ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 10% OR BETTER; 400V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
  - ALL RESISTORS IN OHMS, 5%: 1/2W.
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DRAWN: KOTHRAD ENGR: LORENZEN  
DATABASE FILE: ZCSR4S.SCH

TITLE: SCHEMATIC, VIBRO-KING

SIZE: **D** DRAWING NUMBER: **0041253000** REV: **K**

RELEASE DATE: 19-JUL-04 SHEET: 1 OF 1