



BASSBREAKER™ 15

(This is the model name for warranty claims)

p/n 2262000000 (COMBO 120V)

p/n 2263000000 (HEAD 120V)

SERVICE MANUAL



ATTENTION:

WARRANTY SERVICE PROCEDURES

The Bassbreaker 15 Amplifier is considered to be field serviceable to the component level. As such stuffed PCB Assemblies are not readily available for this unit. Any Fender Authorized Service Center in need of a warranty replacement PCB Assembly for this unit should contact FMIC Tech Support and you will be instructed on how to proceed.



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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 the “△” symbol 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



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SPECIFICATIONS

Model Name:	BASSBREAKER 15 Combo BASSBREAKER 15 Head	
Release Number: <i>(Not a model number)</i>	PR 3034	
Part Numbers	(120V, 60Hz) US:	2262000000
COMBOS:	(110V, 60Hz) TW:	2262001000
	(240V, 50Hz) AUS:	2262003000
	(230V, 50Hz) UK:	2262004000
	(230V, 50Hz) ARG:	2262005000
	(230V, 50Hz) EUR:	2160506000
	(100V, 50Hz) JPN:	2262007000
	(220V, 60Hz) ROK:	2262009000
Part Numbers	(120V, 60Hz) US:	2263000000
HEADS:	(110V, 60Hz) TW:	2263001000
	(240V, 50Hz) AUS:	2263003000
	(230V, 50Hz) UK:	2263004000
	(230V, 50Hz) ARG:	2263005000
	(230V, 50Hz) EUR:	2163506000
	(100V, 50Hz) JPN:	2263007000
	(220V, 60Hz) ROK:	2263009000
Power Requirement:	95W	
Power Output:	15W RMS into 4, 8, or 16 Ohms @ ~15 %THD	
Impedances	Input :	1 Meg Ohms
	Line Out:	100 Ohms
	Effects Loop SEND:	900 Ohms
	Effects Loop RETURN:	22k Ohms
Dimensions (Combo)	Height:	17.5 in (44.5 cm)
	Width:	19.56 in (49.7 cm)
	Depth:	9.0 in (22.9 cm)
	Weight:	44 lbs (20 kg)



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Dimensions (Head)

Height:	9.75 in (24.8 cm)
Width:	19.56 in (49.7 cm)
Depth:	8.81 in (22.4 cm)
Weight:	27 lbs (12.3 kg)

Product specifications are subject to change without notice



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SERVICE NOTES

As modern day amplifiers are more compact and sophisticated proper wire dress becomes a critical issue, both for the sake of Safety and FCC Certification. It is highly recommended that before disassembly you take digital photos to use as a reference during reassembly, for wire and component dress. Factory set locations for wire dress, wire ties, ferrites, and anchors should be maintained at all times. Use the following procedures to disassemble the Bassbreaker 15 for service access. **Please note that all coaxial cables use multi-pin connectors which are all of the same type. During the removal process for all of the PCBs these connectors will need to be disconnected. Since they are all the same in order to prevent confusion and miss-wiring it is highly recommended that colored markers or labels be used to ID the proper cable connector PCB Header relationship. Also again as stated several photos should be taken to assure proper wire dress during reassembly.**

CHASSIS REMOVAL is accomplished by first removing the five (5) screws from the rear upper screen panel. Next remove the five (5) screws which secure the rear lower panel to the cabinet. On the Combo Version Only disconnect the Speaker Terminal Wires at the Speaker. Remove the two (2) side chassis screws (4 total) on the left and right side of the cabinet. Now supporting the chassis remove the two (2) top chassis screws and remove the chassis from the cabinet. Access to the inside of the chassis can then be accomplished by removing the seven (7) screws which secure the rear chassis cover and folding it back out of the way.

REAR PANEL PCB ASSEMBLY REMOVAL is accomplished by first marking and unplugging the five (5) PCB multi-wire connectors at designation #P44-P48 from the I/O PCB Assembly. Next remove the two screws holding the Line Out XLR Jack to the

Rear Panel. Remove the two EFX Loop Jack Nuts and Washers from the rear panel noting their makeup for reassembly. Remove the six (6) PCB Mounting standoff screws from the PCB and separate the PCB from the Rear Panel.

TOP PANEL INPUT PCB ASSEMBLY REMOVAL is accomplished by marking and unplugging the four (4) multi-pin connectors P30-P33 on the Input PCB Assembly. Remove the Gain Knob, Control Nut and Washer. Remove the nut and washer from the input jack. You can now remove the Front Panel Input PCB Assembly.

SPEAKER JACK PCB ASSEMBLY REMOVAL begins by disconnecting the four (4) fast-on connectors P107-P110 from the PCB. Remove the Speaker Jack nuts and washers (Noting their makeup for reassembly). The PCB can now be removed from the chassis.

IMPEDANCE SELECTOR SWITCH PCB ASSEMBLY REMOVAL is initiated by disconnecting the seven (7) fast-on connectors noting the color code indicated on the PCB. Remove the two (2) screws holding the PCB Assembly to the back panel. The PCB Assembly can now be removed from the chassis.

GAIN/STRUCTURE CONTROL PCB ASSEMBLY REMOVAL is started by marking and unplugging the five (5) multi-pin connectors P39-P43. Remove the control knob, nut, and washer. The PCB can now be removed.

CONTROL PCB ASSEMBLY REMOVAL begins by marking and unplugging the five (5) multi-pin connectors P34-P38. Clip the wire tie located on the rear right corner of the PCB. Remove the five (5) top panel control knobs, nuts and washers to separate the PCB from the Top Panel.



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TUBE PCB ASSEMBLY REMOVAL starts by removing the tubes and the thirteen (13) screws which hold the PCB to the bottom side of the chassis. At this point by pulling up on the PCB and tilting it forward you should have enough access to replace most of the components located on the board. If it becomes necessary to remove the PCB it is best done by also removing the Power Supply PCB Assembly at the same time. This is due to the fact that the boards are hardwired together. The procedure for removing the Power PCB Assembly follows below. Again it is a very good idea to take a few digital photos and color marking or labeling all multi-pin connectors before disassembly to make sure original factory wiring and wire dress is maintained.

POWER PCB ASSEMBLY REMOVAL as stated above must be accomplished by first removing the Rear Panel PCB Assembly, Speaker Jack PCB Assembly, Input PCB Assembly, Gain/Structure PCB Assembly, and the Control PCB Assembly. Once

these PCB assemblies have been removed you will have full access to the top side of the Power PCB Assembly. Before attempting to remove the Tube PCB and Power PCB Assemblies as a unit every attempt should be made to repair the Power PCB Assembly from the top side. If top side repair is impossible then proceed with the Tube PCB/Power PCB Removal.

Start the Tube PCB Assembly and Power Supply PCB Assembly removal by marking and disconnecting the fast-on connections from the Power Transformer, Output Transformer, Choke and Mute Switch. These are labeled as P3-P8, P49, & P50 from the Power Supply PCB and P21-P23, P25 & P27 from the Tube PCB. Remove the thirteen (13) screws securing the Power Supply PCB to the Chassis bottom. At this point you should be able to carefully remove the two (2) PCB Assemblies from the chassis.

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 FMIC Customer Service Department to order the complete PCB Assembly.

CIRCUIT DESCRIPTION

This section provides concise information about new or unusual circuit 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.

PRE-AMPLIFIER

The guitar input signal is injected into INPUT jack J6 on the INPUT PCB. Via a coax, this signal is fed to the TUBE PCB to the first tube gain stage (V5-A).

AC coupling cap C56 feeds the GAIN control via a coax. GAIN control R123 is on the INPUT PCB. A coax sends this signal to the GAIN CONTROL PCB to be routed via the first section of rotary switch S1.

The S1 rotary switch is a two section control that provides signal routing for the LOW, MED, & HIGH Gain STRUCTURES available.

For the LOW Gain STRUCTURE, S1-A & B routes the V5-A signal directly to gain stage U4-B to drive the tone controls. The LOW Gain STRUCTURE provides 2 stages of tube gain before the tone controls.



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For the MED Gain STRUCTURE, S1-A routes the V5-A signal to gain stage V4-A. S1-B routes this medium gain signal to V4-B & then the tone controls. The MED Gain STRUCTURE provides 3 stages of tube gain before the tone controls.

For the HIGH Gain STRUCTURE, the GAIN control feeds gain stage V5-B directly. This additionally amplified signal is then fed to gain stage V4-A via rotary switch S1-A. S1-B routes this signal to V4-B & then the tone controls. The HIGH Gain STRUCTURE provides 4 stages of tube gain before the tone controls.

Following the V4-B stage (common to LOW, MED, & HIGH Gain STRUCTURES), AC coupling cap C64 feeds a coax to send the signal to the TREBLE/BASS/MID tone control circuit (R126, R124, & R125 respectively) found on the CONTROL PCB. The MASTER VOLUME control (R127) follows the tone controls.

The MASTER VOLUME control's wiper output is coaxially coupled to the EFFECTS LOOP's op amp circuitry (U1-A & -B and U2-A). The EFFECTS LOOP circuitry is found on the REAR PANEL PCB. The EFFECTS LOOP SEND is J3; the RETURN is J4. The EFFECTS LOOP circuitry is optimized to work with low-level stomp boxes.

The EFFECTS LOOP output signal is routed to the POWER SUPPLY PCB. Op-amps U8-A & -B conditions the signal to the reverb card (attached to P5 - FMIC p/n 0096569000). This is a digital hall REVERB "daughter card" mounted above the POWER SUPPLY PCB. The REVERB wet output signal is then routed to the CONTROL PCB where control R128 allows the user to set the REVERB's wet output level for its wet/dry mix.

The EFFECTS LOOP output (U2-A) and the REVERB output (U9-B) are sent to summing op-amp U2-B on the REAR PANEL PCB to create the REVERB's wet/dry mix. The output of U2-B feeds the POWER AMP input. JFET Q1 is placed at the non-inverting input of U2-B to kill the signal to the power amp if the amp is placed in MUTE mode.

The LINE OUT signal remains active for silent recording when the amp is configured in MUTE.

The reverb for the line out is summed with the dry signal at op-amp U3-A. An active filter circuit is configured around op-amp U3-B to provide the LINE OUT's SPEAKER CABINET EMULATION equalization when enabled through switch S3. Switch S4 disconnects the chassis ground connection to the shell of XLR jack J5 (GROUND LIFT).

POWER AMPLIFIER

The Power Amplifier is a push-pull design using two EL84s power tubes (V1 & V2) found on the TUBE PCB. Both V1's & V2's cathode bias is set to approximately 40mA using 5W power resistors R70 & R134. Their screen grid bias is set through R77 & R80.

The power amp's input is a long tail pair phase inverter configuration. This differential amplifier uses both halves of a 12AX7 (V3-A & -B). V3's differential plate signals are AC coupled to the grids of the EL84 power tubes.

The EL84 plates drive a custom designed multi-tap output transformer (T1 - FMIC # 7706195000) to provide an impedance match for 4, 8, & 16 Ohm speaker loads. Its primary is connected onto the TUBE PCB and its secondary is connected to the IMPEDANCE SWITCH PCB mounted on the rear panel. The output transformer tap is selected using S2 (also on the IMPEDANCE SWITCH PCB).

For the COMBO version, the internal speaker is connected to output transformer secondary thru terminals P109 & P110. The COMBO's internal speaker is disconnected when the MAIN SPEAKER jack (J1) is connected to a speaker load through the 1/4" jack. The EXTENSION SPEAKER (J2) will work in tandem with either the internal or EXTERNAL speaker. Obviously, the impedance selector switch should be set to match the effective speaker load connected internally & externally to the amplifier.

For the HEAD version, the amplifier can only drive a speaker load if the MAIN SPEAKER jack (J1) is connected to a 1/4" plug. The EXTENSION SPEAKER (J2) will work in tandem with the MAIN SPEAKER. Obviously, the impedance selector switch should be set to match the effective speaker load connected externally to the amplifier.



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POWER SUPPLY/MUTE

The Power Supply circuitry is found on the POWER SUPPLY PCB. Its circuitry is typical of a Fender tube amplifier with a choke input filter. The secondary side of the Power Transformer consists of 3 windings: high-voltage winding, low-voltage winding and heater winding.

The high voltage red/red secondary winding is used to generate the high voltage DC power supplies in the amplifier. The high voltage DC power supply is energized through a full-wave bridge rectifier configuration to filter cap C80. A choke is inserted between C80 & C42. The output of this supply filter provides B+ to the plates of the EL84 power tubes. The “voltage-drop” resistors R58, R59, & R61, along with their associated filter capacitors C43, C44, & C49, subsequently provide the DC screen-grid voltages for the power tubes and plate voltages for the preamp tube stages in the design. These supplies are routed to the TUBE PCB circuitry through 18 AWG wiring between the two PCBs.

The low voltage brown/brown secondary winding feeds a full-wave bridge & filter configuration to create input DC voltages for regulators U5-U7. These heat-sinked ICs generate the low voltage +/-15.6V & +5V DC power supplies. A primary function of the U5 & U6 power supplies is to provide DC filament drive to the preamp tube heaters (V3-5). The DC bipolar filament voltages couple to the heaters

through R63 & R64 on the POWER SUPPLY PCB. A cable connects this supply to the filaments on the TUBE PCB at P29. A cable also connects the low voltage supplies to the REAR PANEL PCB & CONTROL PCB to power their op-amp analog signal processing & control circuitry. The +5V supply powers the reverb card that is mounted as a daughter card on the POWER SUPPLY PCB.

The green/green heater secondary winding produces a 6.8VAC power supply that energizes the EL-84 power tube (V1 & V2) heater filaments. This secondary does not supply preamp tube filament drive as explained above. This secondary is connected to terminals on the TUBE PCB.

The POWER INDICATOR LED installed inside the control panel jewel. It is controlled by the LM555 timer installed at U4. U4's output drives this LED through R46 via its connections to the red & white wires routed from the rear panel to the control panel.

If the MUTE is enabled, the LED will flash several times per second. When this is flashing, audio is not delivered to the power amp input and nothing should be audible. This allows “silent recording” capability through the rear panel's LINE OUT connection.

If the MUTE is disabled, the amplifier should be capable of delivering audio through an internal &/or an external speaker connection.



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PARTS LIST:		PCB ASSEMBLY	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	0019993000	△CAP AE AX 2200µF 35V 20%	C32, C50
3	0051720000	△CAP AE AX 22µF 450V 20%	C44, C49, C80
2	0054360000	△CAP AE AX 22µF 450V 20% 105C	C42-43
3	0028463003	CAP AE RDL 10µF 50V 20%	C37, C45-46
1	0028458003	CAP AE RDL 1µF 50V 20%	C35
4	0028459003	CAP AE RDL 2.2µF 50V 20%	C40, C51, C58, C65
4	0028467003	CAP AE RDL 22µF 50V 20%	C8, C10-11, C33
6	0028471003	CAP AE RDL 47µF 50V 20%	C60, C62, C66, C78-79, C83
3	0039270001	CAP CA .01µF 50V	C3, C9, C28
10	0038703001	CAP CA .1µF 50V	C17-18, C21-22, C26-27, C38-39, C71-72
6	0039259001	CAP CA 220pF 100v LL	C1-2, C4-7
10	0038873001	CAP CA 22pF 100V LL	C15, C19-20, C23-24, C29, C48, C52, C70, C77
4	0051458003	CAP CD 470pF 500V 10%	C54, C69, C75, C81
4	0025995000	CAP CD 8200pF 1000V 20%	C30-31, C36, C41
1	0027255003	CAP MPF .001uF 100V 10%	C25
1	0027262003	CAP MPF .0068uF 100V 10%	C76
1	0027264003	CAP MPF .01uF 100V 10%	C14
1	0027272003	CAP MPF .047uF 63V 10%	C63
1	0027279003	CAP MPF .1uF 100V 10%	C34
1	0053860000	△CAP MPF .1uF 250VAC 20%	C47
1	0027278003	CAP MPF .1uF 63V 10%	C13
2	0027281003	CAP MPF .22uF 63V 10%	C12, C16
1	0024823000	CAP MPF RDL .01uF 400V 10%	C55
4	0024833000	CAP MPF RDL .022uF 400V 10%	C53, C57, C64, C73
1	0024845000	CAP MPF RDL .047uF 400V 10%	C74
1	0024853000	CAP MPF RDL .1uF 250V 10%	C59
1	0024854000	CAP MPF RDL .1uF 400V 10%	C61
1	0037666002	CAP PFF .001uF 400V 10%	C68
2	0026202002	CAP PFF .0022uF 400V 10%	C56, C67
1	7706518000	CTRL SNAPIN 25k 10A TAPER 180--D SHAFT	R125
1	0096458000	CTRL SNAPIN 1M 5A TAPER 180--D SHAFT	R124
2	0096459000	CTRL SNAPIN 250K 15A TAPER 180--D SHAFT	R123, R127
1	0096460000	CTRL SNAPIN 250K 30A TAPER 180--D SHAFT	R126
1	0096463000	CTRL SNAPIN 25k B TAPER 180--D SHAFT	R128
10	0026730001	DIODE 1N4006 800V 1A	D2-11
1	0006260001	DIODE 1N4448 SIGNAL	D1
2	0047482060	DIODE ZEN 1N5366B 39V 5W 5%	D12-13
12	0026000001	FSTN TAB MALE .187x.032 PCB MT	P23, P25, P27, P49-50, P100-106
10	0025802000	FSTN TAB MALE .250x.032 PCB MT	P2-4, P6-8, P12-13, P21-22
2	0031041000	FSTN TAB ML RTANG PCB .25x.032	P107-108
2	7708801000	△FUSE 213 TYPE 22.5 x 5.8 TIME LAG 1A AXL	F1-2
1	7708800000	△FUSE 213 TYPE 22.5 x 5.8 TIME LAG 3.15A AXL	F3
1	0072485000	HDR .1 CTR 6 CKT SQ PIN LONG	P5
28	0072493000	HDR 2.5mm CTR 2 CKT SQ PIN	P1, P11, P15-20, P24, P26, P28, P30-36, P38-45, P47-48

* 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 Critical 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 Critical Part as defined above.



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PARTS LIST:		<u>PCB ASSEMBLY</u>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
6	0072495000	HDR 2.5mm CTR 3 CKT SQ PIN	P9-10, P14, P29, P37, P46
1	9902205550	IC TIMER LM555	U4
5	0016795000	IC OP-AMP DUAL TL072	U1-3, U8-9
1	0013562000	IC REGULATOR +15V MC7815CT	U6
1	0041812000	IC REGULATOR +5V MC7805CT	U7
1	0013564000	IC REGULATOR -15V MC7915CT	U5
2	0051007000	JACK 1/4 PCB STEREO W/ SWITCH	J3-4
3	0063213000	JACK PCB STEREO CLOSED CKT	J1-2, J6
6	REF	Jumper	W1-6
2	0026368001	RES CF 1/2W 5% 100ohm LL	R78-79
2	0024967001	RES CF 1/4W 5% 1.2k LL	R94, R98
1	0025073001	RES CF 1/4W 5% 1.5M LL	R47
1	0024969001	RES CF 1/4W 5% 1.5k LL	R97
8	0024997001	RES CF 1/4W 5% 100k LL	R8, R13, R21, R45, R54, R56, R74, R111
2	0024952001	RES CF 1/4W 5% 100ohm LL	R132-133
21	0024981001	RES CF 1/4W 5% 10k LL	R10, R19-20, R23-26, R33-40, R49, R84-86, R106, R130
1	0028549001	RES CF 1/4W 5% 110k LL	R104
2	0028955001	RES CF 1/4W 5% 130k LL	R4, R103
2	0024985001	RES CF 1/4W 5% 15k LL	R55, R60
1	0024986001	RES CF 1/4W 5% 18k LL	R102
5	0025069001	RES CF 1/4W 5% 1M LL	R9, R22, R87, R93, R105
8	0024965001	RES CF 1/4W 5% 1k LL	R7, R12, R14-16, R18, R57, R62
4	0025075001	RES CF 1/4W 5% 2.2M LL	R66, R91, R112, R118
1	0024971001	RES CF 1/4W 5% 2.2k LL	R82
1	0029006001	RES CF 1/4W 5% 20k LL	R42
5	0025059001	RES CF 1/4W 5% 220k LL	R11, R27, R51, R90, R100
5	0024987001	RES CF 1/4W 5% 22k LL	R17, R29, R31, R50, R131
5	0025060001	RES CF 1/4W 5% 270k LL	R28, R30, R75, R122, R129
1	0024988001	RES CF 1/4W 5% 27k LL	R43
3	0025077001	RES CF 1/4W 5% 3.3M LL	R5, R83, R117
1	0024973001	RES CF 1/4W 5% 3.3k LL	R41
1	0029604001	RES CF 1/4W 5% 300ohm LL	R101
2	0025079001	RES CF 1/4W 5% 4.7M LL	R6, R116
4	0024977001	RES CF 1/4W 5% 4.7k LL	R44, R46, R113-114
4	0025065001	RES CF 1/4W 5% 470k LL	R1-2, R69, R95
3	0024993001	RES CF 1/4W 5% 47k LL	R92, R115, R121
8	0024947001	RES CF 1/4W 5% 47ohm LL	R32, R71, R76, R81, R109-110, R119-120
2	0028034001	RES CF 1/4W 5% 5.1k LL	R52-53
1	0028018001	RES CF 1/4W 5% 510k LL	R3
2	0024995001	RES CF 1/4W 5% 68k LL	R73, R96
1	0029617001	RES CF 1/4W 5% 750k LL	R48
2	0024980001	RES CF 1/4W 5% 8.2k LL	R89, R99
1	0024964001	RES CF 1/4W 5% 820ohm LL	R88
6	0027353001	RES FILM 1W 5% 100k LL	R65, R67-68, R72, R107-108
1	0037664001	△RES MOX FP 1W 5% 1k LL	R58

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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 Critical 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 Critical Part as defined above.



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PARTS LIST:		<u>PCB ASSEMBLY</u>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	0051417001	RES MOX 2W 5% 22ohm LL	R63-64
2	0034705001	RES MOX 2W 5% 270ohm LL	R77, R80
2	0036469001	△RES MOX FP 1W 5% 4.7k LL	R59, R61
2	0028898000	RES WW BT 5W 5% 240ohm	R70, R134
2	0050817000	SWITCH PB PC VERT MNT DPDT	S3-4
1	0028091000	SWITCH PUSH SLFLK SHORT STROKE	S5
1	7706795000	SWITCH SLIDE DPTT PC MOUNT BTN SLOT	S2
1	7707764000	SWITCH ROTARY 2P3T BBM PCB MT	S1
1	0028503000	△THERMISTOR 10 ohm 5A C60-11	RT1
1	7709441000	LED TULIP PANEL MOUNT ASSY WHITE 14"	RED =WJ15, BLK =WJ13
1	0049892000	XLR CONNECTOR MALE GOLD	J5
1	0041465003	XSTR N-CH JFET J113 TO-92	Q1
3	0050849000	△HEATSINK PCB LEVEL 576012	@ U5-7
5	0029167000	△TUBE SOCKET 9 PIN PCB MOUNT	@ V1-5
3	0039420000	SCRW M 4-40x3/8 PHP SS SE	@ U5-7
3	0097360000	NUT HEX 4-40 EX LOCK	@ U5-7
1	7710500000	RING RETENTION ROT SW CK	@ S1
3	0028104000	BUTTON PUSH SWITCH BLACK	S3-5
2	0065384000	EXTENSION BUTTON 2.8mm SHAFT	@ S3-4
13	0097360000	NUT HEX 4-40 EX LOCK	@ TUBE PCB ASSY. STANDOFFS
13	0038519000	STANDOFF M/F 4-40 x 1/4L	@ TUBE PCB ASSY STANDOFFS
4	0053952000	STANDOFF NYLON BLK 0.25"	@ POWER PCB FOR REVERB CARD
		FOR COMBO ONLY	
2	0026000001	FSTN TAB MALE .187x.032 PCB MT	P109-110
		FOR HEAD ONLY	
1	REF	WIRE JUMPER	JMP 1

PARTS LIST:		<u>CHASSIS ASSEMBLY COMBO</u>	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706192000	△XFMR PWR 15W EL84 120V	
1	7706193000	△XFMR PWR 15W EL84 230V/240V	
1	7706194000	△XFMR PWR 15W EL84 100V	
1	7706195000	△XFMR OUTPUT 15W 4/8/16 OHMS	
1	0036486000	△CHOKE RE-ISSUE TUBE AMPS	
1	7706196000	△*PCB ASSY BASSBREAKER 15	
1	0096569000	△*PCB ASSEMBLY REVERB	
7	7706965000	KNOB BASSBREAKER FLAT 180 DEG	
1	0091860000	JEWEL PILOT LITE WHITE	
1	0032219000	COLLAR-PILOT LIGHT	
1	0031625000	NUT HOLDER PILOT LIGHT 11/16-27	
2	0036570000	△SWITCH TOGGLE DPST W/NUTS	
2	0022293000	WSHR FLAT .473x.750 NI	@ Toggle Switches

* 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 Critical 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 Critical Part as defined above.



BASSBREAKER™ 15

(This is the model name for warranty claims)

PARTS LIST: CHASSIS ASSEMBLY COMBO			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0036702000	△FUSE HOLDER 3AG FINGER GRIP	
1	0036703000	△FUSE HOLDER 5MM FINGER GRIP	EXPORT
1	0048827000	△FUSE QA 1-1/4x1/4 250v 2A	
1	0020789000	△FUSE QA 20mmx5mm250V 1A	EXPORT
1	0054642000	△CONNECTOR IEC SNAP IN	
1	5550112406	TUBE 7025/12AX7WC RUSN FENDER	V3
2	5550112391	TUBE 7025/12AX7A ECC83S GT-GOLD	V1, V2
1	5550113580	TUBE EL84-S SLOVAKIA MATCHED DUET	V4, V5
2	7706159000	RETAINER TUBE EL84 BASSBREAKER	
4	0039371000	SPRING RETAINER TUBE 1.81Lx.15	
2	0079630000	GROMMET RUBBER .38 ID x .500 MTG	
3	0064512000	COLLAR TUBE SHIELD 9PIN	
3	0023598000	TUBE SHIELD (099-0723-000)	
3	0069393000	NUT 6-32 HEX EXT LOCK	
8	0022004000	NUT KEPS #8-32 ZINC	
3	0014206000	SCREW #6-32 x 1/4 UFHP BLX	
13	0031188000	SCRW M 4-40x1/4 PHP ZI ITWS	
4	0014999000	SCRW M 6-32x1/4 PHP BLX	
20	0064836000	SCRW M 6-32x1/4 PHP ZI SEMS	
2	0021568000	SCRW M 6-32x3/16 PHP NI	
8	7707655000	SCRW M 8-32x3/8 PHP ZI SEMS	
2	0048890000	SCRW TF 4-40x1/4 PHP BLX	
8	0038900000	SCRW TF 6-32x1/4 PHP ZI	
5	0031153000	WASHER FLAT 3/8 X .614 NICKEL	
2	9904300100	WASHER LCK INTL 3/8x.681x.032	
1	0018022000	BUSHING SNAP 5/16x17/32 BLK	
1	0031263000	BUSHING SNAP SHORT 3/4X15/16 BLK	
2	0012560000	BUSHING SNAP 5/8x27/32 BLK2096	
1	0078863000	CABLE ASSY XH 2-CKT COAX 10"	
2	7708152000	CABLE ASSY XH 2-CKT COAX 18"	
2	7707861000	CABLE ASSY XH 3-CKT 12"	
11	0091149000	CABLE ASSY XH 2-CKT COAX 5"	
1	7707599000	CABLE ASSY XH 3-CKT 7"	

PARTS LIST: CHASSIS ASSEMBLY - HEAD			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706192000	△XFMR PWR 15W EL84 120V	
1	7706193000	△XFMR PWR 15W EL84 230V/240V	
1	7706194000	△XFMR PWR 15W EL84 100V	
1	7706195000	△XFMR OUTPUT 15W 4/8/16 OHMS	
1	0036486000	△CHOKE RE-ISSUE TUBE AMPS	
1	7708263000	△*PCB ASSY BASSBREAKER 15 HEAD	
1	0096569000	△*PCB ASSEMBLY REVERB	
7	7706965000	KNOB BASSBREAKER FLAT 180 DEG	

* 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 Critical 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 Critical Part as defined above.



BASSBREAKER™ 15

(This is the model name for warranty claims)

PARTS LIST: CHASSIS ASSEMBLY - HEAD			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0091860000	JEWEL PILOT LITE WHITE	
1	0032219000	COLLAR-PILOT LIGHT	
1	0031625000	NUT HOLDER PILOT LIGHT 11/16-27	
2	0036570000	△SWITCH TOGGLE DPST W/NUTS	
2	0022293000	WSHR FLAT .473x.750 NI	
1	0036702000	△FUSE HOLDER 3AG FINGER GRIP	
1	0036703000	△FUSE HOLDER 5MM FINGER GRIP	EXPORT
1	0048827000	△FUSE QA 1-1/4x1/4 250v 2A	
1	0020789000	△FUSE QA 20mmx5mm250V 1A	EXPORT
1	0054642000	△CONNECTOR IEC SNAP IN	
1	0070228000	TUBE 7025/12AX7WC RUSN FENDER	
2	0074287400	TUBE 7025/12AX7A ECC83S GT-GOLD	
2	0097124000	TUBE EL84-S SLOVAKIA	
2	7706159000	RETAINER TUBE EL84 BASSBREAKER	
4	0039371000	SPRING RETAINER TUBE 1.81Lx.15	
2	0079630000	GROMMET RUBBER .38 ID x .500 MTG	
3	0064512000	COLLAR TUBE SHIELD 9PIN	
3	0023598000	TUBE SHIELD (099-0723-000)	
3	0069393000	NUT 6-32 HEX EXT LOCK	
8	0022004000	NUT KEPS #8-32 ZINC	
3	0014206000	SCREW #6-32 x 1/4 UFHP BLX	
13	0031188000	SCRW M 4-40x1/4 PHP ZI ITWS	
4	0014999000	SCRW M 6-32X1/4 PHP BLX	
20	0064836000	SCRW M 6-32x1/4 PHP ZI SEMS	
2	0021568000	SCRW M 6-32x3/16 PHP NI	
8	7707655000	SCRW M 8-32x3/8 PHP ZI SEMS	
2	0048890000	SCRW TF 4-40x1/4 PHP BLX	
8	0038900000	SCRW TF 6-32X1/4 PHP ZI	
1	0031263000	BUSHING SNAP SHORT 3/4X15/16 BLK	
2	0012560000	BUSHING SNAP 5/8x27/32 BLK2096	
1	0026438000	PLUG BUTTON .437" BLACK #2633	
1	0078863000	CABLE ASSY XH 2-CKT COAX 10"	
2	7708152000	CABLE ASSY XH 2-CKT COAX 18"	
2	7707861000	CABLE ASSY XH 3-CKT 12"	
11	0091149000	CABLE ASSY XH 2-CKT COAX 5"	
1	7707599000	CABLE ASSY XH 3-CKT 7"	
2	9904300100	WASHER LCK INTL 3/8x.681x.032	
5	0031153000	WASHER FLAT 3/8 X .614 NICKEL	

PARTS LIST: CABINET ASSEMBLY - COMBO			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706188000	*CABINET ASSY BASSBREAKER 15 COMBO	COMPLETE CABINET

* 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 Critical 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 Critical Part as defined above.



BASSBREAKER™ 15

(This is the model name for warranty claims)

PARTS LIST: <u>CABINET ASSEMBLY - COMBO</u>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
2YD	7706172000	COVERING TWEED BLACK	
2YD	0026317000	△CLOTH GRILLE BLACK PVC	
1	7706170000	△HANDLE BASSBREAKER SERIES	
4	0064162000	NUT T 8-32X1/2 STR 3 SPNG BLX	#8 T-NUT FOR HANDLE
4	7704305000	SCRW M 8-32x3/4 OHP NI	HANDLE SCREWS
8	0011678000	SCREW SMA #8 1-1/2 OHP BLX	SPKR BAFFLE SCREWS
8	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	BAFFLE SCREW CONE WASHER
4	0048976000	FOOT RUBBER 1-1/2"	
4	0033380000	SCRW SMAB 8X1 RHP BLX	FEET SCREWS
4	0021972000	NUT T 10-32X3/4 STR 3 PRNG BLX	
1	7706201000	*NAMEPLATE BASSBREAKER 15	
3	0075721000	SCREW SMA #6x5/8 FHP BLX	EXTENSION SCREWS

PARTS LIST: <u>CABINET ASSEMBLY - HEAD</u>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706207000	*CABINET ASSY BASSBREAKER 15 HEAD	COMPLETE CABINET
2YD	0026317000	△CLOTH GRILLE BLACK PVC	
2YD	7706172000	COVERING TWEED BLACK	
1	7706170000	△HANDLE BASSBREAKER SERIES	
4	0064162000	NUT T 8-32X1/2 STR 3 SPNG BLX	#8 T-NUT FOR HANDLE
4	7704305000	SCRW M 8-32x3/4 OHP NI	HANDLE SCREWS
8	0011678000	SCREW SMA #8 1-1/2 OHP BLX	BAFFLE SCREWS
8	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	BAFFLE SCREW CONE WASHER
4	0048976000	FOOT RUBBER 1-1/2"	
4	0033380000	SCRW SMAB 8X1 RHP BLX	FEET SCREWS
4	0021972000	NUT T 10-32X3/4 STR 3 PRNG BLX	
1	7706201000	*NAMEPLATE BASSBREAKER 15	
3	0075721000	SCREW SMA #6x5/8 FHP BLX	EXTENSION SCREWS

PARTS LIST: <u>END ITEM ASSEMBLY – COMBO</u>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706187000	△*PANEL REAR PERF BB15	
1	7706157000	*LOGO FENDER BASSBREAKER SERIES	
1	7700343000	SPKR CELESTION V12-70	
6	0036619000	SCRW M 10-32x1-1/2 THP NI	
5	0037215000	WSHR C/SUNK NICKEL #6	
5	0016188000	SCRW WOOD 6x1 OHP NI	
4	0047821000	SCRW M 10-32 3/4 THP STL BLX	
5	0067014000	SCRW SMA 6X5/8 THP BLX	
4	0029821000	EYELET RFLNGD .215 OD x.315 L	
2	0037210000	SCRW SMA 2x3/8 OHP NI	
1	0047248000	△CORD PWR W/ IEC DOM	

* 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 Critical 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 Critical Part as defined above.



BASSBREAKER™ 15

(This is the model name for warranty claims)

PARTS LIST: END ITEM ASSEMBLY – COMBO			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0047251000	△CORD PWR W/IEC CONN 230V	
1	0047249000	△CORD PWR W/IEC CONN 230V UK	
1	0047250000	△CORD PWR W/IEC CONN 250V	
1	0053997000	△CORD PWR W/IEC CONN 100V JPN	
1	0057674000	△CORD PWR W/IEC 230V ARG	

PARTS LIST: END ITEM ASSEMBLY- HEAD			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	7706187000	△PANEL REAR PERF BB15	
1	7706157000	LOGO FENDER BASSBREAKER SERIES	
6	0036619000	SCRW M 10-32x1-1/2 THP NI	
5	0067014000	SCRW SMA 6X5/8 THP BLX	
4	0029821000	EYELET RFLNGD .215 OD x.315 L	
2	0037210000	SCRW SMA 2x3/8 OHP NI	
1	0047248000	△CORD PWR W/ IEC DOM	
1	0047251000	△CORD PWR W/IEC CONN 230V	
1	0047249000	△CORD PWR W/IEC CONN 230V UK	
1	0047250000	△CORD PWR W/IEC CONN 250V	
1	0053997000	△CORD PWR W/IEC CONN 100V JPN	
1	0057674000	△CORD PWR W/IEC 230V ARG	

* 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 Critical 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 Critical Part as defined above.



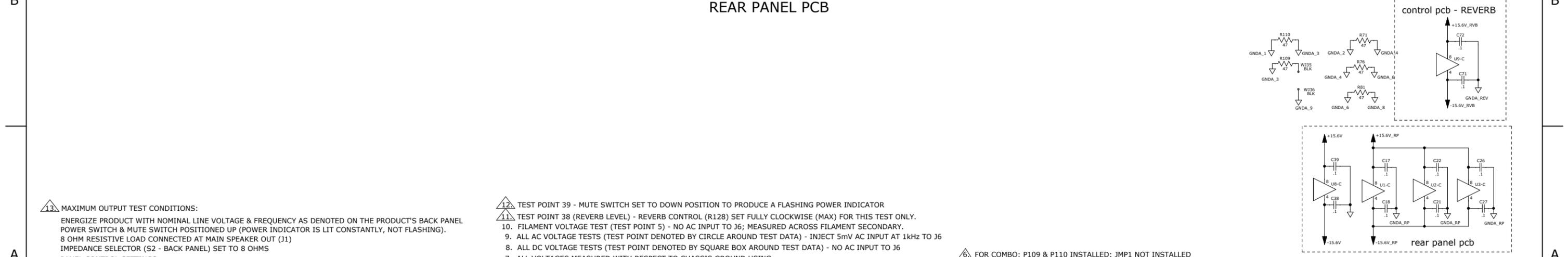
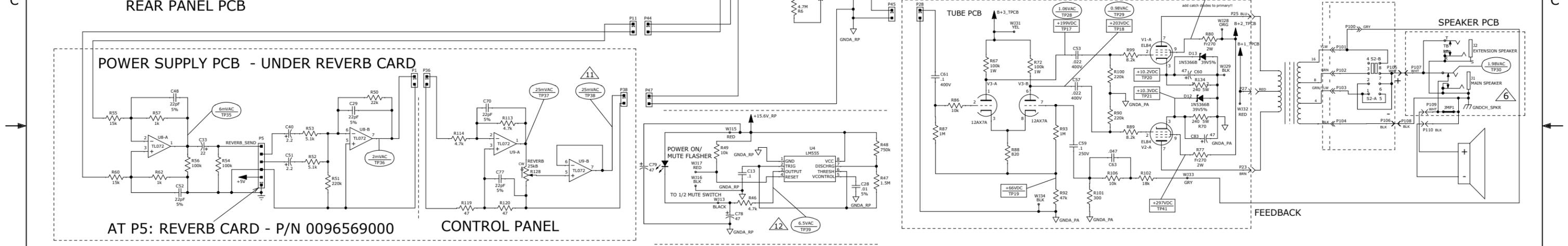
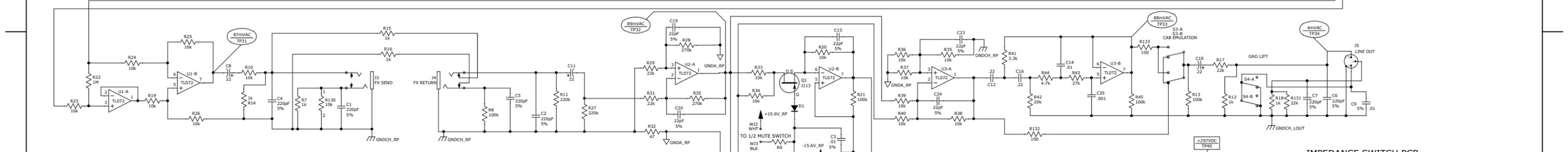
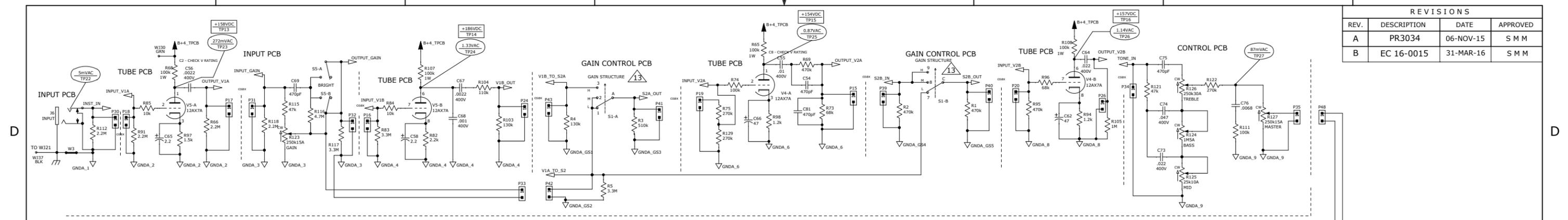
BASSBREAKER™ 15

(This is the model name for warranty claims)

Service Diagram List

Service Diagram (Schematic).....	Bassbreaker 15 Main PCB
Service Diagram (PCB Assembly).....	Bassbreaker 15 Main PCB

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR3034	06-NOV-15	S M M
B	EC 16-0015	31-MAR-16	S M M



13. MAXIMUM OUTPUT TEST CONDITIONS:
 ENERGIZE PRODUCT WITH NOMINAL LINE VOLTAGE & FREQUENCY AS DENOTED ON THE PRODUCT'S BACK PANEL POWER SWITCH & MUTE SWITCH POSITIONED UP (POWER INDICATOR IS LIT CONSTANTLY, NOT FLASHING). 8 OHM RESISTIVE LOAD CONNECTED AT MAIN SPEAKER OUT (I1)
 IMPEDANCE SELECTOR (S2 - BACK PANEL) SET TO 8 OHMS

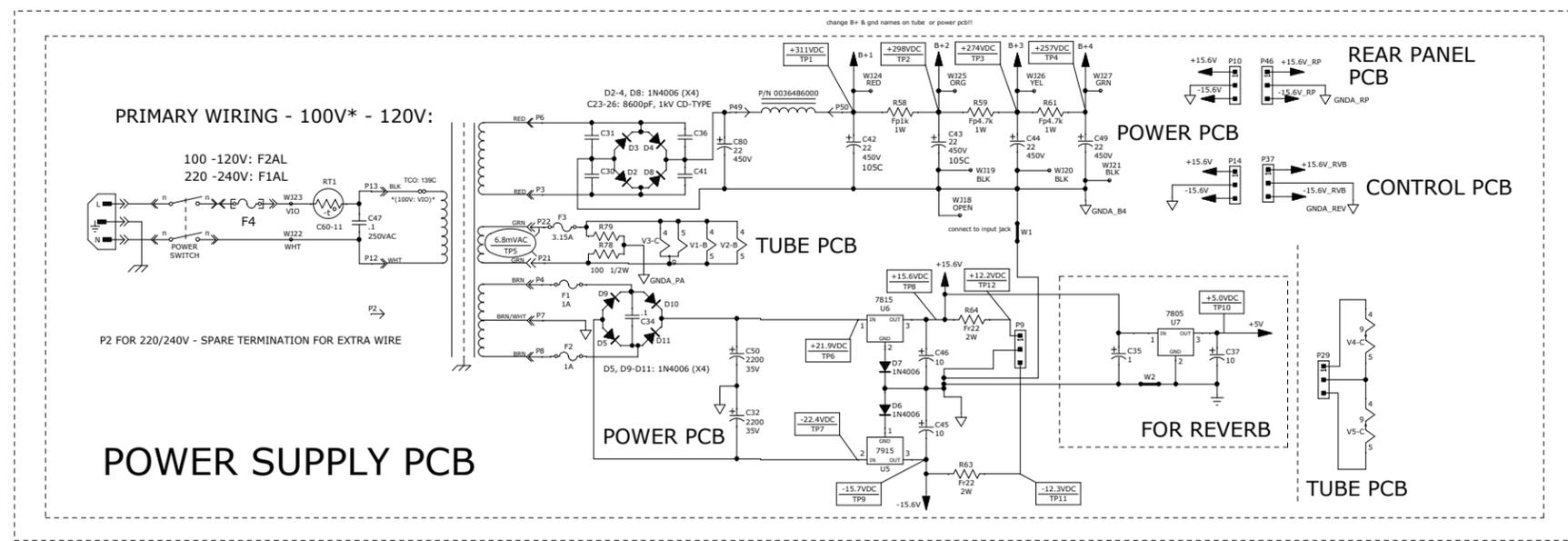
PANEL CONTROL SETTINGS:
 TREBLE AT 12:00
 BRIGHT SWITCH OUT
 ALL OTHER CONTROLS INCLUDING GAIN: FULLY CLOCKWISE (MAX) EXCEPT REVERB (MIN)
 AT TP30 (J1), OBSERVE CLIPPED OUTPUT OF 15W +/- 20% FOR THE FOLLOWING 1kHz INPUT SIGNAL LEVELS (J6) AT THE THE 3 GAIN STRUCTURE SETTINGS (S1) BELOW:
 GAIN STRUCTURE = LOW: INPUT = 15 mVrms
 GAIN STRUCTURE = MED: INPUT = 3 mVrms
 GAIN STRUCTURE = HIGH: INPUT = 0.3 mVrms

12. TEST POINT 39 - MUTE SWITCH SET TO DOWN POSITION TO PRODUCE A FLASHING POWER INDICATOR
11. TEST POINT 38 (REVERB LEVEL) - REVERB CONTROL (R128) SET FULLY CLOCKWISE (MAX) FOR THIS TEST ONLY.
 10. FILAMENT VOLTAGE TEST (TEST POINT 5) - NO AC INPUT TO J6; MEASURED ACROSS FILAMENT SECONDARY.
 9. ALL AC VOLTAGE TESTS (TEST POINT DENOTED BY CIRCLE AROUND TEST DATA) - INJECT 5mV AC INPUT AT 1kHz TO J6
 8. ALL DC VOLTAGE TESTS (TEST POINT DENOTED BY SQUARE BOX AROUND TEST DATA) - NO AC INPUT TO J6
 7. ALL VOLTAGES MEASURED WITH RESPECT TO CHASSIS GROUND USING A DVM WITH AT LEAST 1MEG AC INPUT IMPEDANCE & 10MEG DC INPUT IMPEDANCE. VOLTAGES MAY VARY +/- 20%.
 NOMINAL TEST CONDITIONS:
 ENERGIZE PRODUCT WITH NOMINAL LINE VOLTAGE & FREQUENCY AS DENOTED ON THE PRODUCT'S BACK PANEL POWER SWITCH & MUTE SWITCH POSITIONED UP (POWER INDICATOR IS LIT CONSTANTLY, NOT FLASHING). 8 OHM RESISTIVE LOAD CONNECTED AT MAIN SPEAKER OUT (I1)
 IMPEDANCE SELECTOR (S2 - BACK PANEL) SET TO 8 OHMS
 PANEL CONTROL SETTINGS:
 GAIN AT 12:00
 BRIGHT SWITCH OUT
 STRUCTURE CONTROL SWITCH SETTING: LOW
 ALL OTHER CONTROLS FULLY CLOCKWISE (MAX) EXCEPT REVERB (MIN)

6. FOR COMBO: P109 & P110 INSTALLED; JMP1 NOT INSTALLED FOR HEAD: P109 & P110 NOT INSTALLED; JMP1 INSTALLED
 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 7706200000 AND PCB ASSEMBLY P/N'S 7706169000 (COMBO) & 7708263000 (HEAD).
 4. ALL DIODES ARE 1N4448.
 3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
 2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 1. ALL RESISTORS IN OHMS, 5%; 1/4W.
 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.		MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY: _____	TITLE: SERVICE DIAGRAM, BASSBREAKER 15 MAIN PCB ASSY (schematic)		
DATE: _____	SIZE: D	DRAWING NUMBER: 7706210000	REV: B
APPROVED BY: _____	RELEASE DATE: 06-NOV-15 SHEET: 1 OF 3		
DRAWN: GIT'LO	ENGR: GIT'LO		
DATABASE FILE: Z3034S.SCH			

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	EC 16-0015	31-MAR-16	S M M



PRIMARY WIRING - 220V-240V

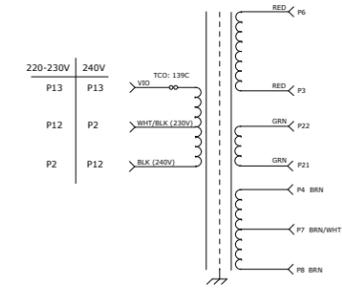


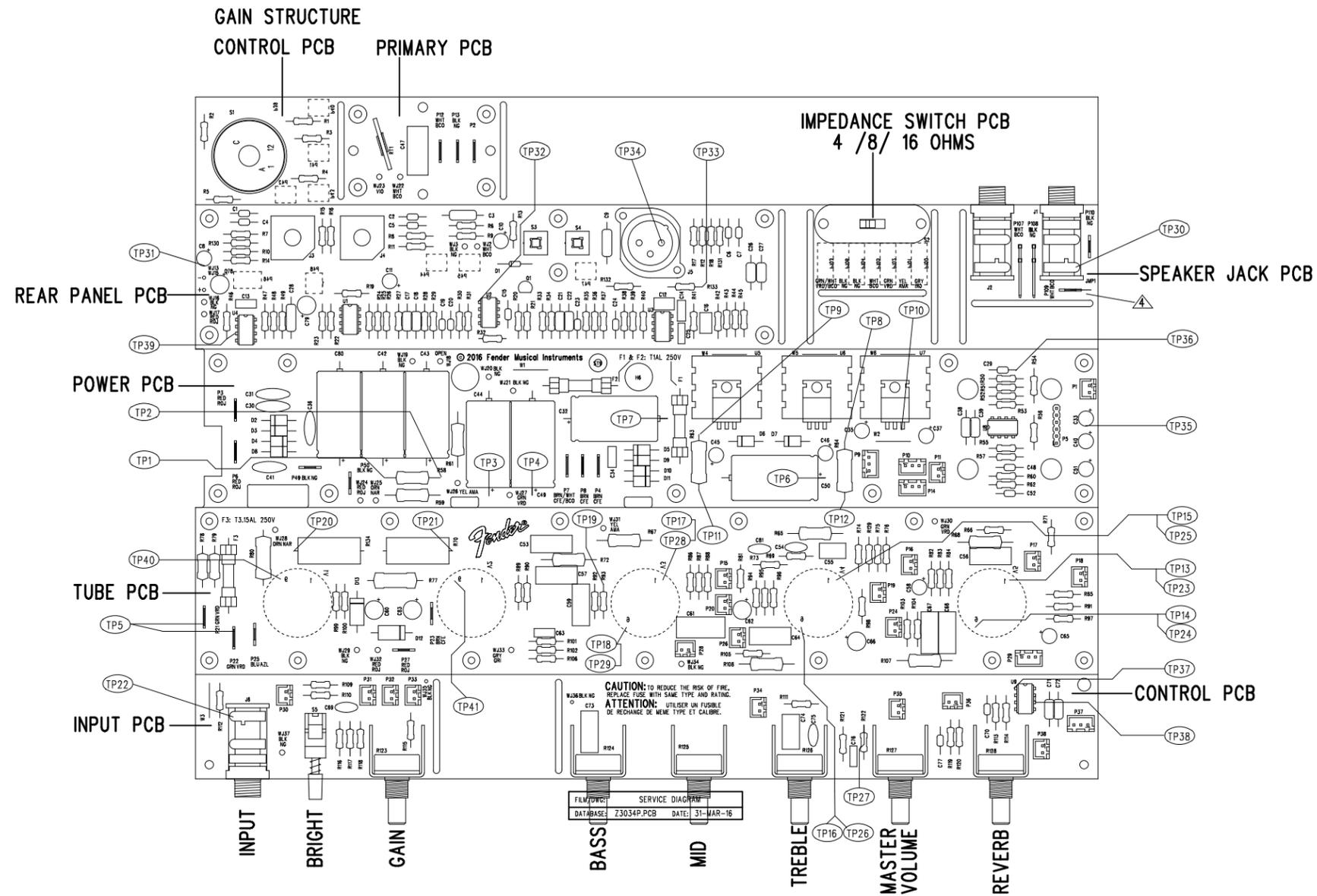
TABLE 1:
BB15 - PRIMARY WIRING & MAINS FUSES FOR INTERNATIONAL SERVICE

LINE VOLTAGE	POWER TRANSFORMER	COLOR - P13	COLOR - P12	COLOR - P2	MAIN FUSE - FMIC #
100	7706194000	VIOLET	WHITE	X	F2A - 0048827000
110	7706192000	BLACK	WHITE	X	F2A - 0048827000
120	7706192000	BLACK	WHITE	X	F2A - 0048827000
220	7706193000	VIOLET	WHT/BLK	BLK	F1A - 0020789000
230	7706193000	VIOLET	WHT/BLK	BLK	F1A - 0020789000
240	7706193000	VIOLET	BLK	WHT/BLK	F1A - 0020789000

NOTES:
SEE SHEET 1

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CHECKED BY: _____	DATE: _____	TITLE: SERVICE DIAGRAM, COMBINED BASSBREAKER 15 MAIN PCB ASSY	
APPROVED BY: _____	DATE: _____	SIZE: D	DRAWING NUMBER: 7706210000
DRAWN: GIT'LO	ENGR: GIT'LO	REV: B	
DATABASE FILE: Z30345.SCH		RELEASE DATE: 06-NOV-15	SHEET: 2 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR3034	6-NOV-15	S M M
B	EC 16-0015	31-MAR-16	S M M

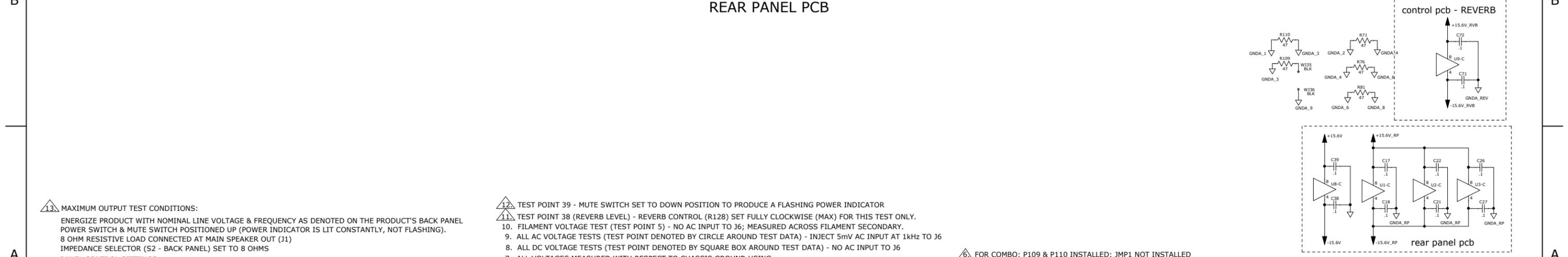
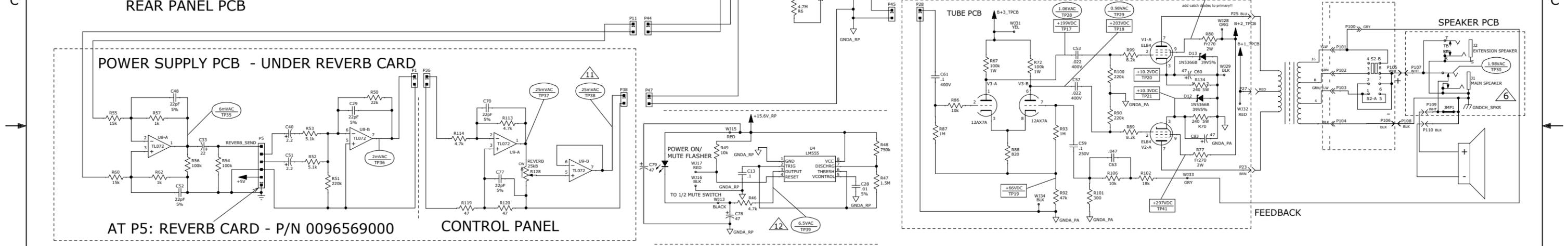
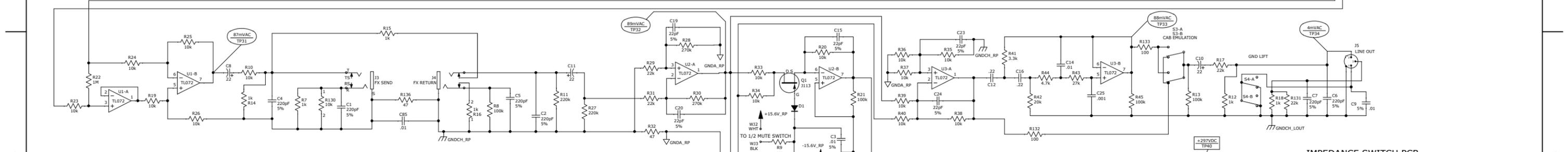
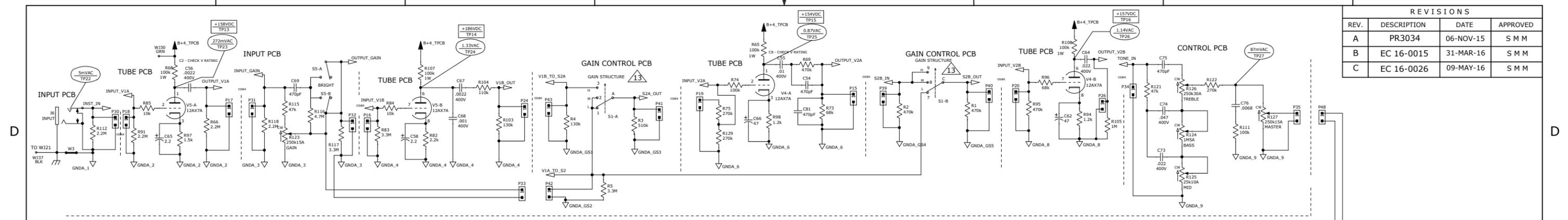


- △ AT SPEAKER JACK PCB: P109 & P110 INSTALLED IN COMBO UNITS ONLY. JUMP1 INSTALLED IN HEAD UNITS ONLY.
- 3. WIRES NOT SHOWN FOR CLARITY.
- 2. PCB ASSEMBLY SHOWN AS FABRICATED BEFORE INSTALLATION IN CHASSIS.
- 1. SEE SHEET 1 OF 2 FOR TEST CONDITIONS AND TEST POINT VALUES.

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:	TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) BASSBREAKER 15 AMPLIFIERS ALL PCB SUB-ASSEMBLIES	
APPROVED BY:	DATE:	SIZE: D	DRAWING NUMBER: 7706210000
DRAWN: HAN LE	ENGR: GIT'16	RELEASE DATE: 08-OCT-15	SHEET 2 OF 2
DATABASE FILE: Z3034P.PCB			

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR3034	06-NOV-15	S M M
B	EC 16-0015	31-MAR-16	S M M
C	EC 16-0026	09-MAY-16	S M M



13. MAXIMUM OUTPUT TEST CONDITIONS:
 ENERGIZE PRODUCT WITH NOMINAL LINE VOLTAGE & FREQUENCY AS DENOTED ON THE PRODUCT'S BACK PANEL POWER SWITCH & MUTE SWITCH POSITIONED UP (POWER INDICATOR IS LIT CONSTANTLY, NOT FLASHING). 8 OHM RESISTIVE LOAD CONNECTED AT MAIN SPEAKER OUT (I1)
 IMPEDANCE SELECTOR (S2 - BACK PANEL) SET TO 8 OHMS

12. TEST POINT 39 - MUTE SWITCH SET TO DOWN POSITION TO PRODUCE A FLASHING POWER INDICATOR
11. TEST POINT 38 (REVERB LEVEL) - REVERB CONTROL (R128) SET FULLY CLOCKWISE (MAX) FOR THIS TEST ONLY.
 10. FILAMENT VOLTAGE TEST (TEST POINT 5) - NO AC INPUT TO J6; MEASURED ACROSS FILAMENT SECONDARY.
 9. ALL AC VOLTAGE TESTS (TEST POINT DENOTED BY CIRCLE AROUND TEST DATA) - INJECT 5mV AC INPUT AT 1kHz TO J6
 8. ALL DC VOLTAGE TESTS (TEST POINT DENOTED BY SQUARE BOX AROUND TEST DATA) - NO AC INPUT TO J6
 7. ALL VOLTAGES MEASURED WITH RESPECT TO CHASSIS GROUND USING A DVM WITH AT LEAST 1MEG AC INPUT IMPEDANCE & 10MEG DC INPUT IMPEDANCE. VOLTAGES MAY VARY +/- 20%.
 NOMINAL TEST CONDITIONS:
 ENERGIZE PRODUCT WITH NOMINAL LINE VOLTAGE & FREQUENCY AS DENOTED ON THE PRODUCT'S BACK PANEL POWER SWITCH & MUTE SWITCH POSITIONED UP (POWER INDICATOR IS LIT CONSTANTLY, NOT FLASHING). 8 OHM RESISTIVE LOAD CONNECTED AT MAIN SPEAKER OUT (I1)
 IMPEDANCE SELECTOR (S2 - BACK PANEL) SET TO 8 OHMS
 PANEL CONTROL SETTINGS:
 GAIN AT 12:00
 BRIGHT SWITCH OUT
 ALL OTHER CONTROLS INCLUDING GAIN: FULLY CLOCKWISE (MAX) EXCEPT REVERB (MIN)
 AT TP30 (J1), OBSERVE CLIPPED OUTPUT OF 15W +/- 20% FOR THE FOLLOWING 1kHz INPUT SIGNAL LEVELS (J6) AT THE THE 3 GAIN STRUCTURE SETTINGS (S1) BELOW:
 GAIN STRUCTURE = LOW: INPUT = 15 mVrms
 GAIN STRUCTURE = MED: INPUT = 3 mVrms
 GAIN STRUCTURE = HIGH: INPUT = 0.3 mVrms

6. FOR COMBO: P109 & P110 INSTALLED; JMP1 NOT INSTALLED FOR HEAD: P109 & P110 NOT INSTALLED; JMP1 INSTALLED
 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 7706200000 AND PCB ASSEMBLY P/N'S 7706169000 (COMBO) & 7708263000 (HEAD).
 4. ALL DIODES ARE 1N4448.
 3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
 2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
 1. ALL RESISTORS IN OHMS, 5%; 1/4W.
 NOTES: (UNLESS OTHERWISE NOTED)

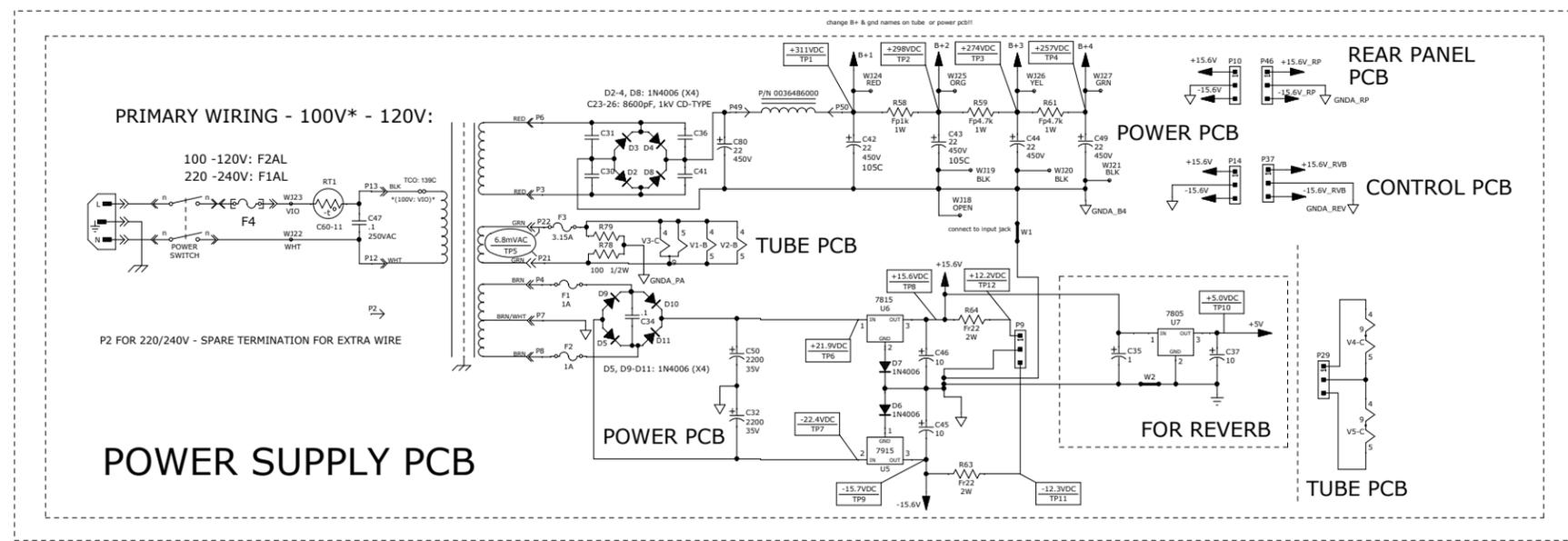
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 DRAWN: GIT'LO ENGR: GIT'LO DATABASE FILE: Z3034S.SCH

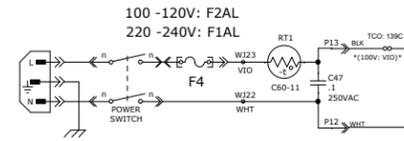
Fender MUSICAL INSTRUMENTS
 Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, BASSBREAKER 15 MAIN PCB ASSY (schematic)
 SIZE: D DRAWING NUMBER: 7706210000 REV. C
 RELEASE DATE: 06-NOV-15 SHEET: 1 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR3034	08-OCT-15	S M M
B	EC 16-0015	31-MAR-16	S M M
C	EC 16-0026	09-MAY-16	S M M



PRIMARY WIRING - 100V* - 120V:



P2 FOR 220/240V - SPARE TERMINATION FOR EXTRA WIRE

POWER SUPPLY PCB

TUBE PCB

POWER PCB

REAR PANEL PCB

CONTROL PCB

FOR REVERB

TUBE PCB

PRIMARY WIRING - 220V-240V

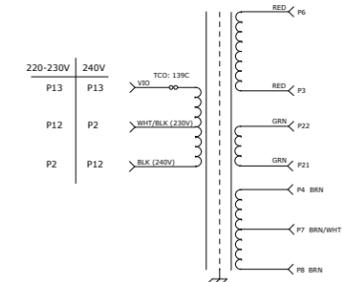


TABLE 1:
BB15 - PRIMARY WIRING & MAINS FUSES FOR INTERNATIONAL SERVICE

LINE VOLTAGE	POWER TRANSFORMER	COLOR - P13	COLOR - P12	COLOR - P2	MAIN FUSE - FMIC #
100	7706194000	VIOLET	WHITE	X	F2A - 0048827000
110	7706192000	BLACK	WHITE	X	F2A - 0048827000
120	7706192000	BLACK	WHITE	X	F2A - 0048827000
220	7706193000	VIOLET	WHT/BLK	BLK	F1A - 0020789000
230	7706193000	VIOLET	WHT/BLK	BLK	F1A - 0020789000
240	7706193000	VIOLET	BLK	WHT/BLK	F1A - 0020789000

NOTES:
SEE SHEET 1

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CHECKED BY: _____	DATE: _____	TITLE: SERVICE DIAGRAM, COMBINED BASSBREAKER 15 MAIN PCB ASSY	
APPROVED BY: _____	DATE: _____	SIZE: D	DRAWING NUMBER: 7706210000
DRAWN: GIT'LO	ENGR: GIT'LO	REV: C	
DATABASE FILE: Z3034S.SCH		RELEASE DATE: 06-NOV-15	SHEET: 2 OF 3

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR3034	6-NOV-15	S M M
B	EC 16-0015	31-MAR-16	S M M
C	EC 16-0026	09-MAY-16	S M M

D

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C

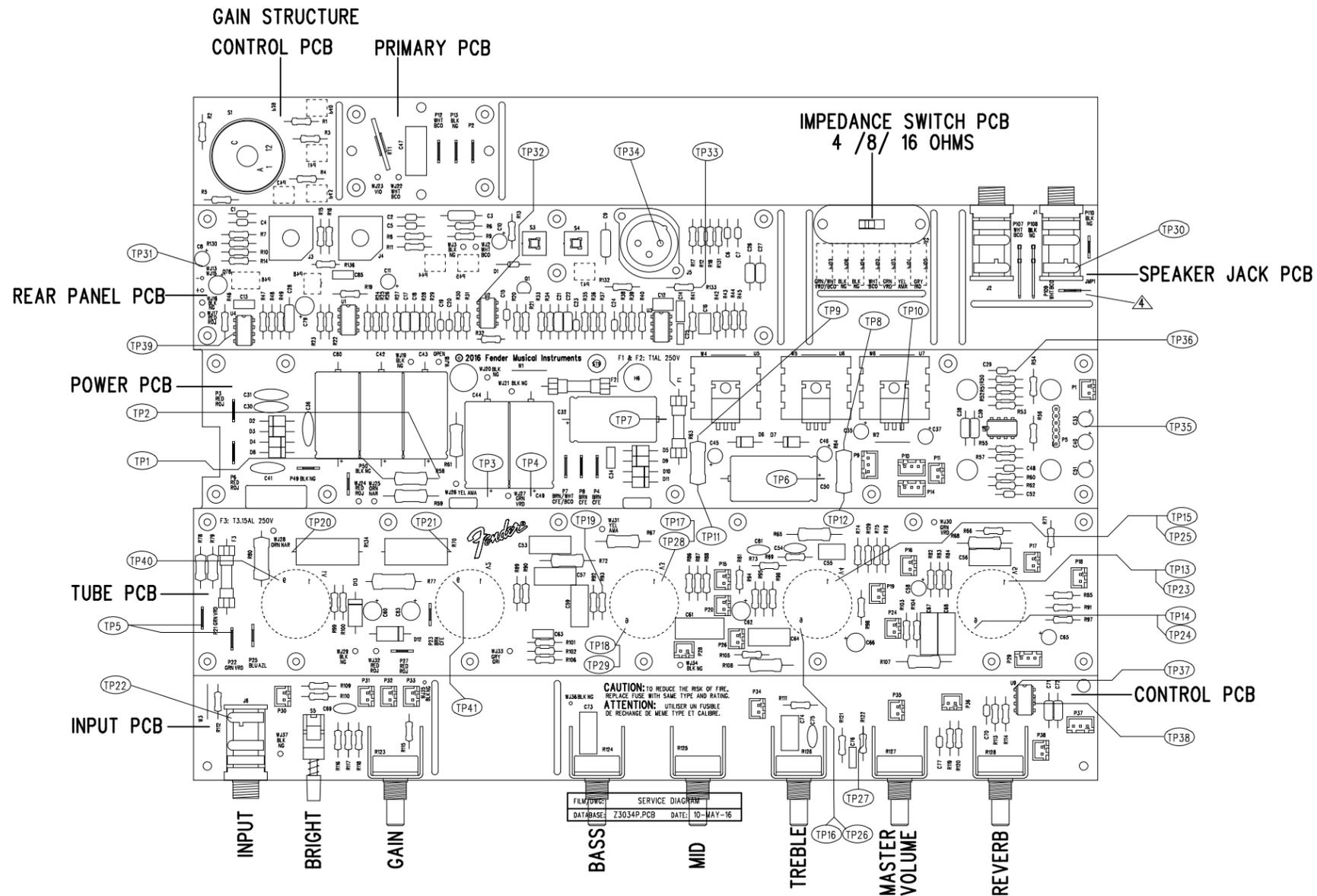
C

B

B

A

A



- △ AT SPEAKER JACK PCB: P109 & P110 INSTALLED IN COMBO UNITS ONLY. JUMP1 INSTALLED IN HEAD UNITS ONLY.
- 3. WIRES NOT SHOWN FOR CLARITY.
- 2. PCB ASSEMBLY SHOWN AS FABRICATED BEFORE INSTALLATION IN CHASSIS.
- 1. SEE SHEET 1 OF 2 FOR TEST CONDITIONS AND TEST POINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY:	DATE:	TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) BASSBREAKER 15 AMPLIFIERS ALL PCB SUB-ASSEMBLIES	
APPROVED BY:	DATE:	SIZE: D	DRAWING NUMBER: 7706210000
DRAWN: HAN LE	ENGR: GIT'16	RELEASE DATE: 08-OCT-15	SHEET 2 OF 2
DATABASE FILE: Z3034P.PCB			REV. C

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