

JRX100

JRX100

JRX118SP User Guide



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Explanation of Graphic Symbols



The exclamation point within an equilateral triangle is intended to alert the users to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



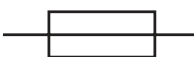
The lightning flash with the arrowhead symbol, within an equilateral triangle, is to alert the user to the presence of insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



CAUTION: TO REDUCE THE RISK OF ELECTRONIC SHOCK - DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.




ATTENTION: POUR ÉVITER LES RISQUES DE CHOC ÉLECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIÈCES INTÉRIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIÉ. AVIS: POUR ÉVITER LES RISQUES D'INCENDIE OU D'ÉLECTROCUTION, N'EXPOSEZ PAS CET ARTICLE À LA PLUIE OU À L'HUMIDITÉ.



The IEC fuse symbol pictured at the left represents an approved user replaceable fuse. When replacing a fuse, make sure to replace with only the correct type and fuse rating.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit your outlet, consult a electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
11. Only use attachments / accessories specified by the manufacturer.
12. Use only with a cart, stand, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over. 
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when a apparatus has been damaged in any way, such as power-cord or plug is damaged, liquid has been spilled, or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

BEFORE YOU BEGIN

JBL Professional does not support suspension of the JRX100 models covered by this manual nor are these models intended for fixed installation in outdoor or high moisture environments. Moisture can damage the speaker cone and surround and cause corrosion of electrical contacts. Avoid exposing the speakers to direct moisture. Keep speakers out of extended or intense direct sunlight. The driver suspension will prematurely dry out and finished surfaces may be degraded by long-term exposure to intense ultra-violet (UV) light.

JRX100 speakers can generate considerable energy. When placed on a slippery surface such as polished wood or linoleum, the speaker may move due to its acoustical energy output. Precautions should be taken to assure that the speaker does not fall off a stage or table on which it is placed.

Some JRX100 speaker models include a 35mm receptacle cup to allow mounting on tripod stands or use of a pole to mount a satellite speaker over a subwoofer. When using stands or poles, be sure to observe the following precautions:

- Check the stand or pole specification to be certain it is designed to support the weight of the speaker.
- Observe all safety precautions specified by the stand manufacturer.
- Always verify that the stand or subwoofer is placed on a flat, level, and stable surface and be sure to fully extend the legs of tripod type stands. Position the stand so that the legs do not present a trip hazard.
- Route cables so that performers, production crew, and audience will not trip over them and pull the speaker over.
- Do not attempt to place more than one speaker on a stand designed for a single speaker.
- Always be cautious in windy, outdoor conditions. It may be necessary to place additional weight (i.e. sandbags) on the base of the stand to add stability.
- Unless you are confident that you can handle the weight of the speaker, ask another person to help you get it onto the tripod stand or pole.

Hearing damage, prolonged exposure to excessive SPL

JRX100 loudspeakers are easily capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution should be taken to avoid prolonged exposure to SPL in excess of 90 dB.

Amplifier Module Precautions

Do not attempt to service this unit beyond instructions contained in this manual. Refer all servicing to a JBL Professional Authorized Service Center. Servicing is required when the apparatus has been damaged in any way, such as power-supply input connector is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Keep your JRX118SP amplifier module away from sources of heat, such as a radiator or oven. Do not cover or surround your JRX118SP amplifier module with material that may retain heat, such as a blanket or curtain. Be certain that the vents on the panel of the amplifier module are clear of all obstructions during operation.

WARNING - Shock Hazard: To reduce risk of fire or electric shock, do not expose this unit to rain or moisture. Do not immerse your JRX118SP amplifier module in any liquid. Do not operate your JRX118SP near a pool, bathtub or other standing water. Do not bypass or defeat the grounding or polarization means used on the JRX118SP amplifier module. Make sure all blades on the polarized power plug can be fully inserted into the receptacle or other outlet that will be used with the unit. Your JRX118SP amplifier module should be cleaned only with a dry cloth. Take care of the power cord attached to your JRX118SP amplifier module. Avoid situations where your cord might be stretched, pinched, or otherwise abused. Route it to avoid foot traffic. Pay special attention to the cord connector and attachment points.

SPECIFICATIONS

SPEAKER

System Type:	Powered 18" subwoofer
Frequency Range (-10 dB)	38 Hz - 300 Hz
Frequency Response (± 3 dB):	55 Hz - 300 Hz
Nominal Impedance:	4 ohms
Rated Maximum SPL:	123 dB peak @ 1 m (3.3 ft) at 500 watts
Dimensions (H x W x D):	597 mm x 516 mm x 597 mm (23.5 in x 20.3 in x 23.5 in)
Net Weight:	40.4 kg (89 lbs.)
LF Driver:	JBL 2043-G
Optional Accessories:	1 x 24" pole

AMPLIFIER MODULE

Amplifier Power:	500 watts peak / 300 watts continuous
Input Connectors:	2 x XLR/F "Combi" connectors with a balanced 1/4-inch (6.35 mm) phone jack and a 3-pin female XLR connector 1 x 1/4-inch phone jack, speaker level
Input Impedance:	Nominally 20k Ohms, electronically balanced
Input Sensitivity:	0.5 volts for 300 watt output (SUB LEVEL control fully clock-wise)
Output Connectors:	2 x XLR/M
Crossover:	LPF: 100 Hz, 24 dB / Oct HPF: 25 Hz, 18 dB / Oct
Required AC Mains:	50/60 Hz (North American units are 60 Hz only); 120 and 230-240 VAC ($\pm 10\%$) units are available, 50 Hz
AC Line Current:	120 Volts: 1.4 A at 1/8 power with sine-wave input, 3.6 A at max. power with pink noise 230-240 volts: 0.7 A at 1/8 power with sine-wave input, 1.8 A at max. power with pink noise
Power Consumption at Idle:	No more than 20 watts

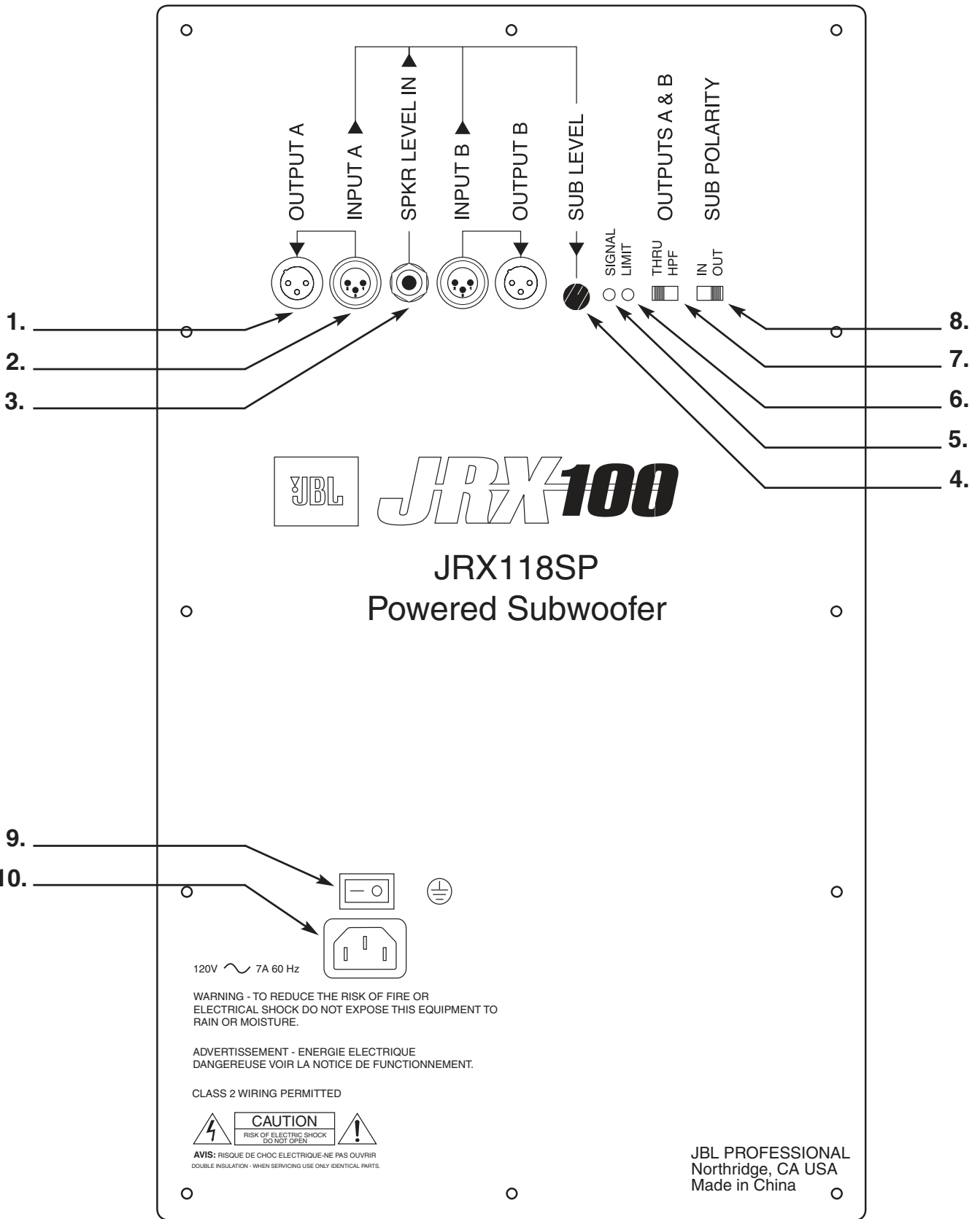
"Frequency Range" and Frequency Response" are based on half-space conditions.

CONTROLS, CONNECTORS AND INDICATORS

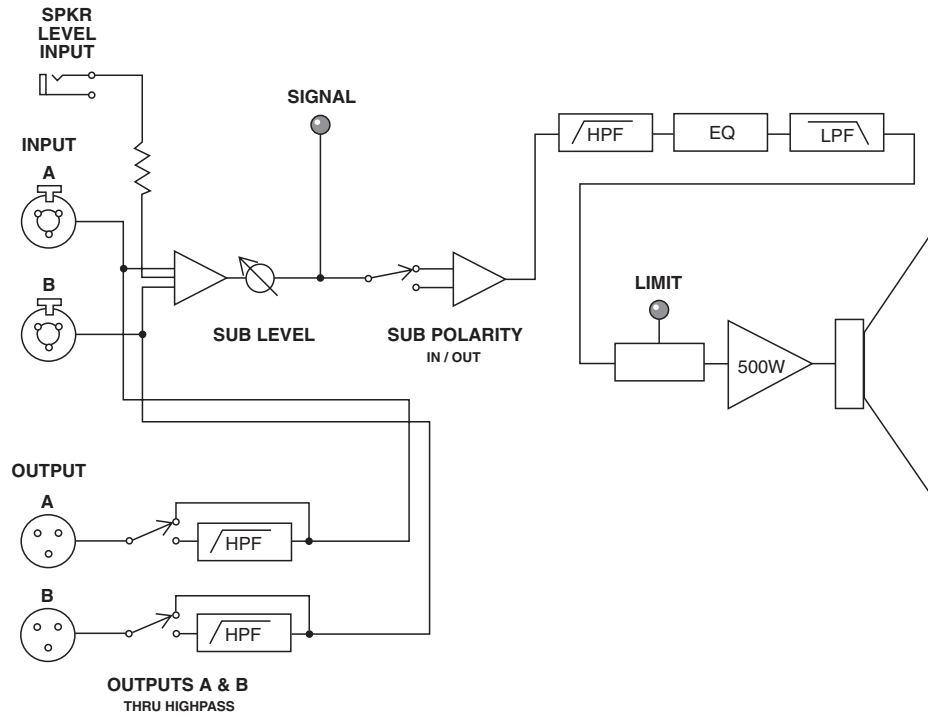
(Refer to Panel Call Out Drawing on page 14)

- 1. OUTPUT A & OUTPUT B CONNECTORS** - OUTPUTS A & B provide either a loop-thru or a high-passed, line level output of the signal from the INPUT A and INPUT B connectors respectively. These connectors work with the OUTPUTS A & B switch.
- 2. INPUT A & INPUT B CONNECTORS** - These electronically balanced, XLR / 1/4" phone "combi" connectors accept input signal from line-level sources. a.) INPUT A and INPUT B are combined before being routed to the JRX118SP Low Pass Filter (LPF) and internal amplifier. b.) INPUT A and INPUT B are also routed to the OUTPUT A and OUTPUT B connectors (see OUTPUTS A & B SWITCH below).
- 3. SPKR LEVEL IN** - This 1/4" phone jack allows connecting of the speaker level output of an amplifier or powered mixer to the JRX118SP internal amplifier.
- 4. SUB LEVEL CONTROL** - Adjusts the input sensitivity of the subwoofer amplifier. Does not affect OUTPUTS A & B.
- 5. SIGNAL** - Lights to indicate that a signal is present at INPUT A, INPUT B or the SPKR LEVEL IN.
- 6. LIMIT** - Lights to indicate that the limiter circuitry has been activated. In normal operation, this light will flicker on and off. If the LIMIT light is lit continuously, it indicates that the amplifier is being driven too hard and that the volume should be reduced.
- 7. OUTPUTS A & B SWITCH** - This switch affects the signal sent to the OUTPUT A & B connectors. a.) THRU: The INPUT A signal is passed directly to the OUTPUT A connector and the INPUT B signal is passed directly to the OUTPUT B connector. b.) HPF: The INPUT A signal is first passed through a 120 Hz, -6 dB High Pass Filter (HPF) before being sent to the OUTPUT A connector. The INPUT B signal is first passed through another 120 Hz, -6 dB High Pass Filter (HPF) before being sent to OUTPUT B connector.
- 8. SUB POLARITY SWITCH** - This switch changes the polarity (sometimes called "phase") of the subwoofer.
- 9. POWER SWITCH** - Turns the AC power of the unit on and off. The switch illuminates to indicate that the unit is on.
- 10. AC INPUT** - For attachment of the included power cable.

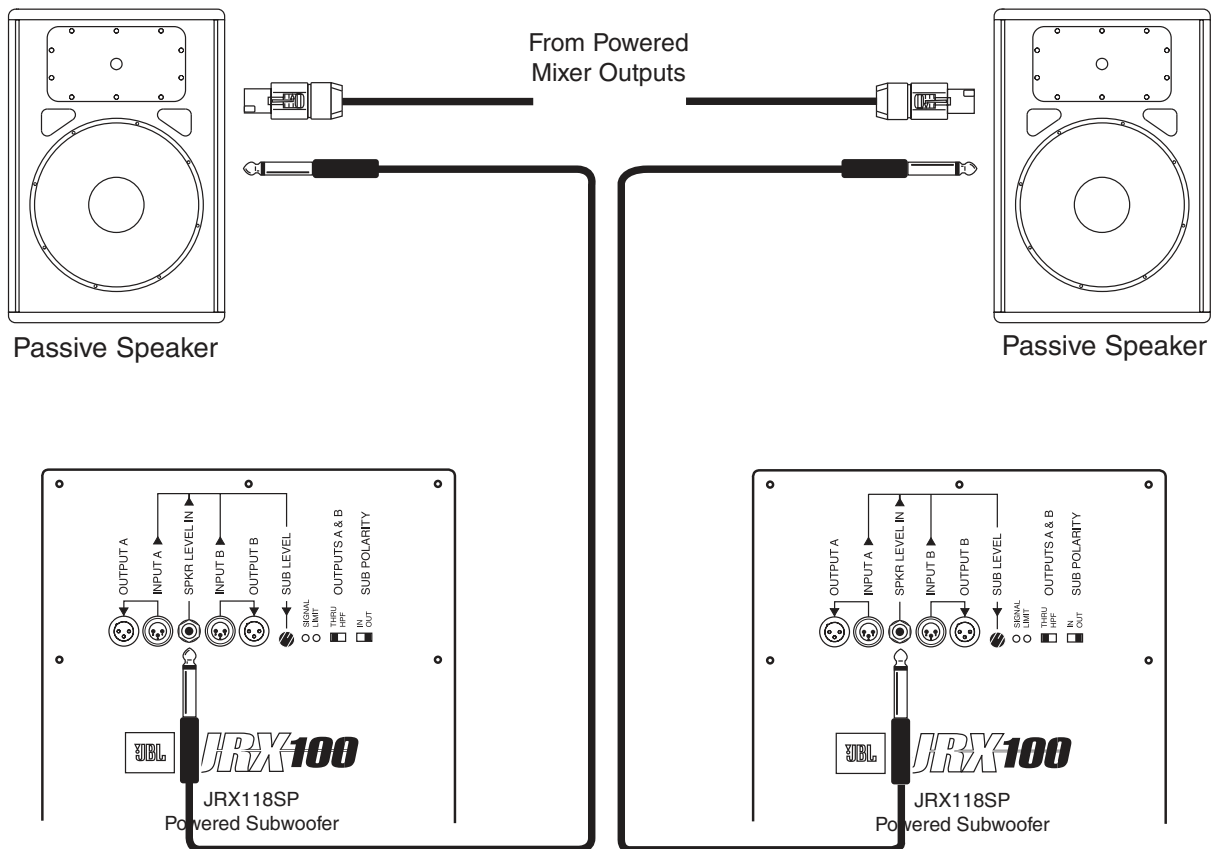
PANEL CALL OUTS



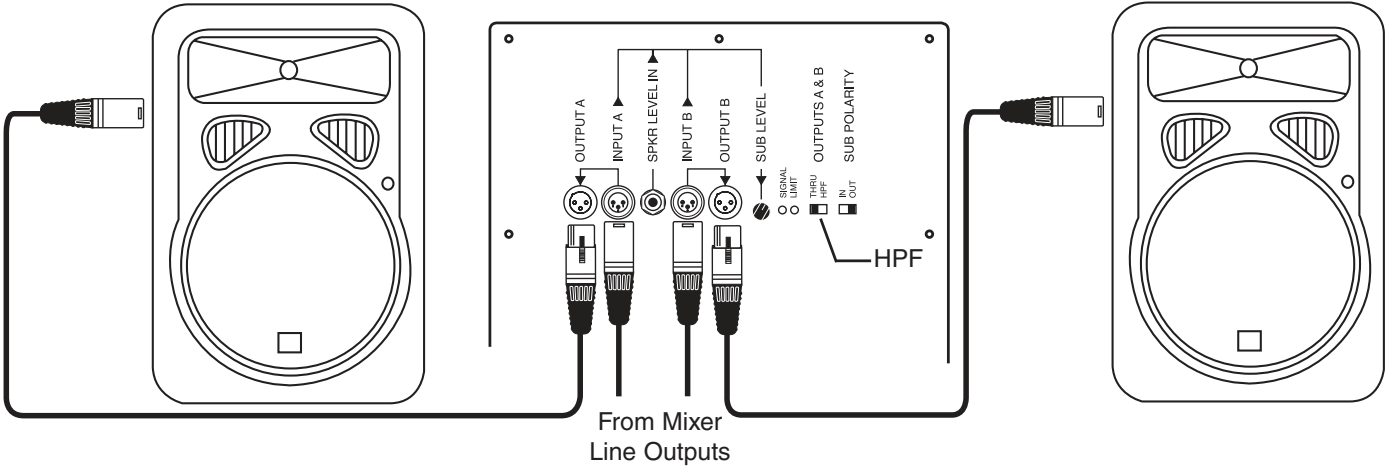
BLOCK DIAGRAM



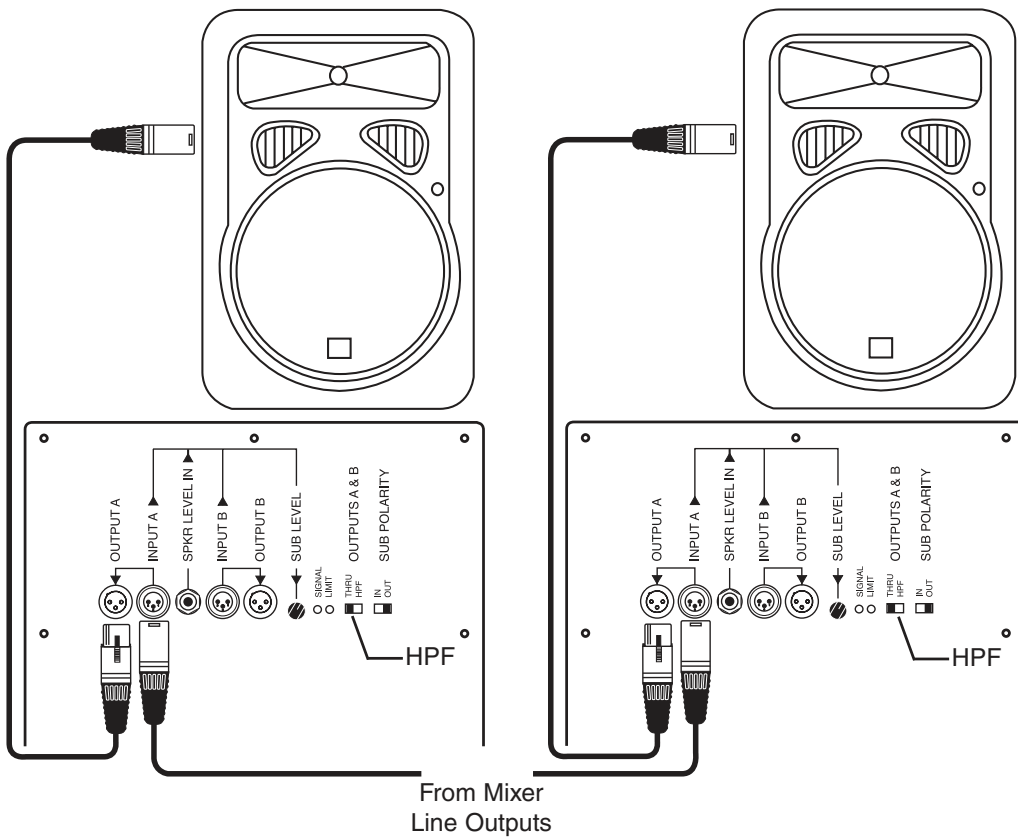
WITH POWERED MIXER



MONO SUB WITH POWERED MID/HIGH



STEREO SUB WITH POWERED MID/HIGH



POWER ON/OFF SEQUENCE

It is a good practice to switch your system on and off in the proper sequence. Doing so can eliminate annoying and potentially damaging turn on/turn off transients.

USING INPUT A & INPUT B CONNECTORS	
Power ON 1. Mixer and Processors 2. JRX118SP 3. Amplifiers or Powered Speakers	Power OFF 1. Powered Speakers or Amplifier 2. JRX118SP 3. Mixer and Processors

USING SPKR LEVEL IN	
Power ON 1. Mixers and Processors 2. Powered Speakers or Amplifiers 3. JRX118SP	Power OFF 1. JRX118SP 2. Powered Speakers or Amplifiers 3. Mixers and Processors

JBL WARRANTY

Who Is Protected by This Warranty?

Your JBL Warranty protects the original owner and all subsequent owners so long as: A.) Your JBL product has been purchased in the Continental United States, Hawaii or Alaska. (This Warranty does not apply to JBL products purchased elsewhere except for purchases by military outlets. Other purchasers should contact the local JBL distributor for warranty information.); and B.) The original dated bill of sale is presented whenever warranty service is required.

The JBL Limited Warranty on professional loudspeaker products (except for enclosures) remains in effect for five years from the date of the first consumer purchase. JBL amplifiers are warranted for three years from the date of original purchase. Enclosures and all other JBL products are warranted for two years from the date of original purchase.

What does the JBL Warranty cover?

Except as specified below, your JBL Warranty covers all defects in material and workmanship. The following are not covered: Damage caused by accident, misuse, abuse, product modification or neglect; damage occurring during shipment; damage resulting from failure to follow instructions contained in your Instruction Manual; damage resulting from the performance of repairs by someone not authorized by JBL; claims based upon any misrepresentations by the seller; any JBL product on which the serial number has been defaced, modified or removed.

Who Pays for What?

JBL will pay all labor and material expenses for all repairs covered by this warranty. Please be sure to save the original shipping cartons because a charge will be made if replacement cartons are requested. Payment of shipping charges is discussed in the next section of this warranty.

How to Obtain Warranty Performance?

If your JBL product ever needs service, write or telephone us at JBL Incorporated (Attn: Customer Service Department), 8500 Balboa Boulevard, PO. Box 2200, Northridge, California 91329 (818/893-8411). We may direct you to an authorized JBL Service Agency or ask you to send your unit to the factory for repair. Either way, you'll need to present the original bill of sale to establish the date of purchase. Please do not ship your JBL product to the factory without prior authorization. If transportation of your JBL product presents any unusual difficulties, please advise us and we may make special arrangements with you. Otherwise, you are responsible for transporting your product for repair or arranging for its transportation and for payment of any initial shipping charges. However, we will pay the return shipping charges if repairs are covered by the warranty.

Limitation of Implied Warranties

ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

EXCLUSION OF CERTAIN DAMAGES

JBL'S LIABILITY IS LIMITED TO THE REPAIR OR REPLACEMENT, AT OUR OPTION, OF ANY DEFECTIVE PRODUCT AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY, FROM STATE TO STATE.

JBL PROFESSIONAL CONTACT INFORMATION

Mailing Address:

JBL Professional
8500 Balboa Blvd.
Northridge, CA 91329

Shipping Address:

JBL Professional
8370 Balboa Blvd., Dock D
Northridge, CA 91329

Customer Service

Monday through Friday
8:00am - 5:00pm
Pacific Coast Time In the U.S.A.
(800) 8JBLPRO (800.852.5776)
www.jblproservice.com

On the World Wide Web:

www.jblpro.com

Product Registration:

Register your product online at www.jblpro.com/registration

H A Harman International Company

Outside the USA:

Contact the JBL Professional Distributor in your area. A complete list of JBL Professional international distributors is provided at our U.S.A. website - www.jblpro.com



Technical Manual

JBL JRX118SP/230

SPECIFICATIONS



ACOUSTIC & ELECTRICAL SPECIFICATIONS:

- Nominal Impedance: 4 Ohms
- Amplifier Power: 300W
- Frequency Range: 38Hz – 300 Hz (-10dB)
- Sensitivity: 96dB SPL (1 Watt at 1 Meter)
- Crossover Frequency: 300Hz

SYSTEM COMPONENTS:

- Cabinet: Enclosure (Not For Sale)
- Grille: 352838-001
- Low Frequency Transducer: 2043G, 460mm (18 in.) Cone Transducer
- DC Resistance: 2.6 ohm

AURAL SWEEP TEST SPECIFICATIONS:

- A. System Aural Sweep Test: 0.5 Vrms for 300 W Output (Sub Level Control Fully Clock-Wise) Sweep 20 Hz to 150 Hz
- B. L.F. Aural Sweep Test: 10.0V Input, 20 Hz to 1.2 kHz

PHYSICAL SPECIFICATIONS:

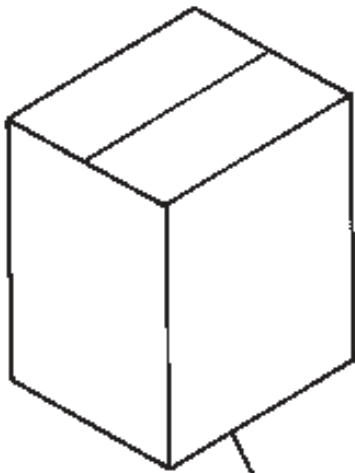
- Enclosure Dimensions: 597mm x 516mm x 597mm D (23.5 x 20.3 x 23.5 in. D)
- Net Weight: 89 lbs. (40.4 kg.)

WARRANTY INFORMATION:

- Refer to Warranty Statement packed with each product.

PACKAGE

Warranty 59660
Spec Sheet 352941-001



Carton
352926-003

Filler (2)
352986-001

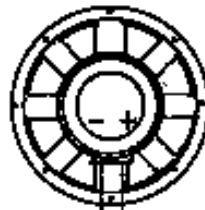
PKG, Microfoam (16)
49790P
20" x 18"



AC Cord
425-00000-00

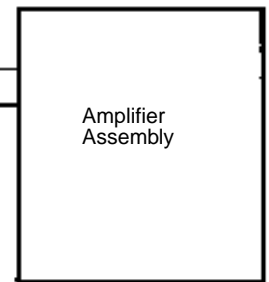
WIRING DIAGRAM

Driver, Low Freq
2043G
(352938-001X)
Cone Repl
C4R2043



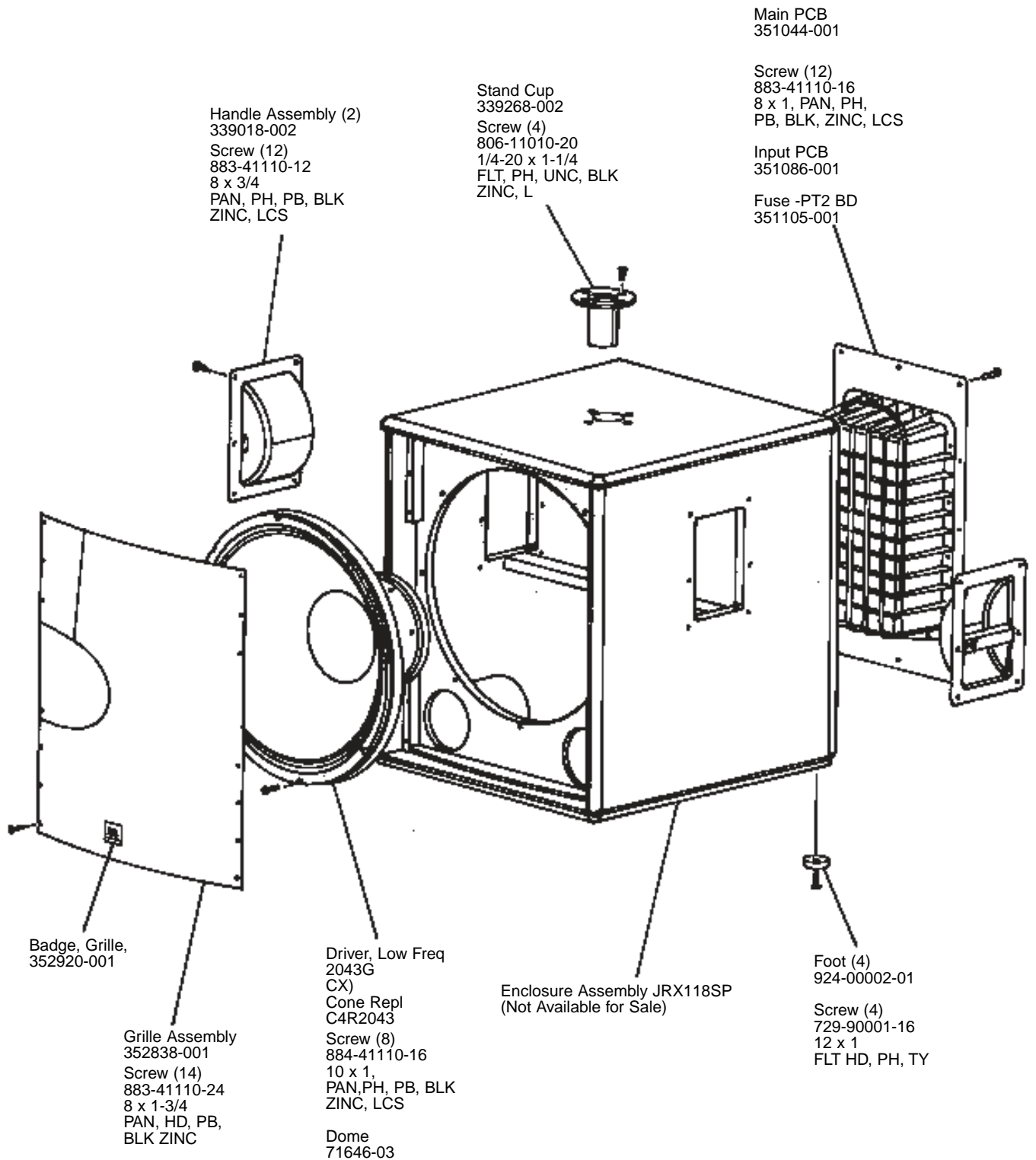
RED

BLK



JBL JRX118SP/230

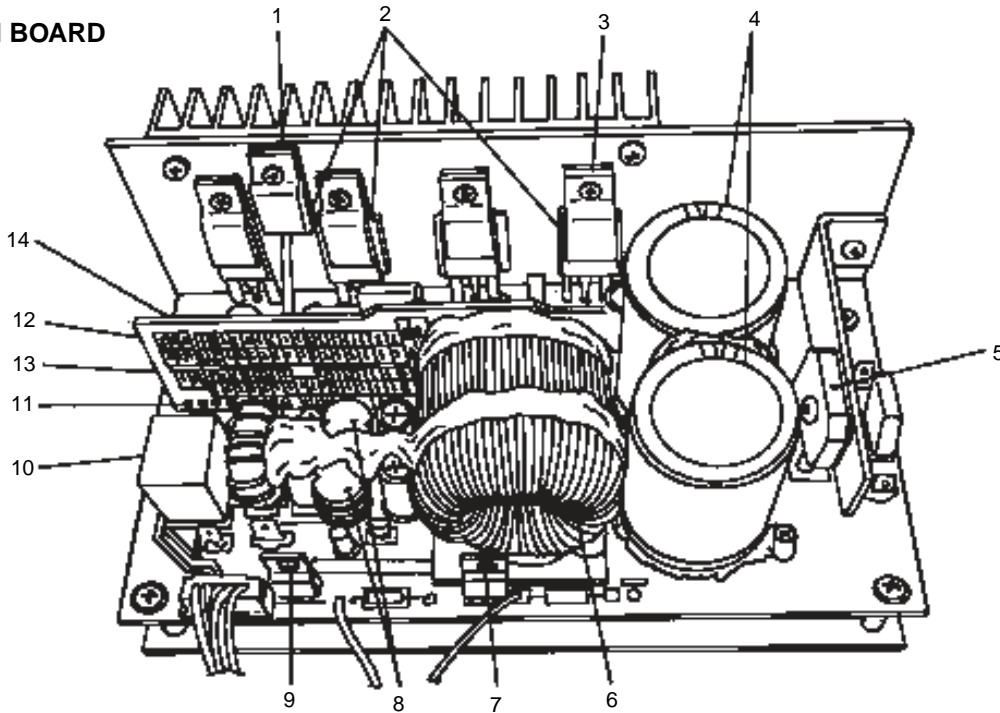
COMPONENT EXPLODED VIEW



JBL JRX118SP/230

COMPONENTS

MAIN BOARD

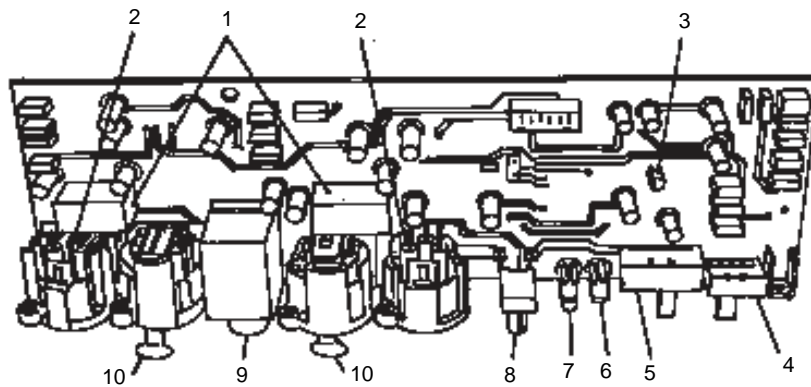


COMPONENT PARTS LIST: Main PCB 351044-001

Item	Part No.	Qty	Description	Ref. Des.
1	351047-001	1	TSE-103 K L:50MM	TH1
2	351056-001	4	IRFP250N	Q11,13,15,17
3	351036-001	5	Brkt Pwr Transistor	P. Transistors
4	351049-001	2	10000 UF63V	C1, C4
5	351059-001	1	400V, 8A	BR1
6	351053-001	1	70UH	L8
7	351060-001	1	LM317T	Q6

Item	Part No.	Qty	Description	Ref. Des.
8	351051-001	2	30MH	L9, L10
9	351061-001	2	LM337T	Q8
10	351070-001	1	48VDC RELAY	RLY1
11	351052-001	1	56 UH	L12
12	351072-001	1	JRX118SP DRIVE	PIN 1 A
13	351398-001	1	7 PIN CONN	
14	331399-001	1	11 PIN CONN	

INPUT BOARD



COMPONENT PARTS LIST: Input PCB 351086-001

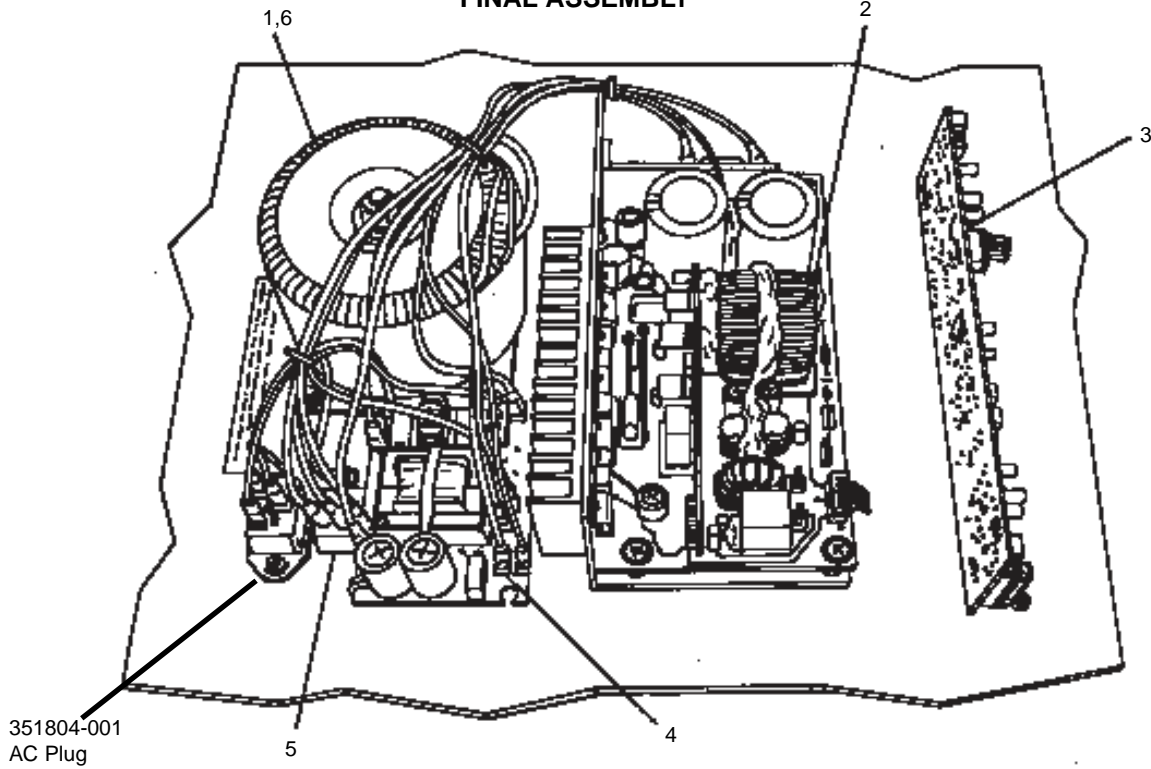
Item	Part No.	Qty	Description	Ref. Des.
1	351104-001	2	TRS-5VDC	K1, K2
2	351098-001	2	PN: NC3MAH	JK201,JK204
3	351090-001	1	J113	Q206
4	351103-001	1	PO12BA-PA8 SW	S202
5	351102-001	1	P242BLB-PC10 SW	S201/SW201

Item	Part No.	Qty	Description	Ref. Des.
6	351089-001		PN: LT6431-81	D213
7	351088-001	1	PN: LT6421-81	D210
8	351087-001	1	PN: RD09L1120032-EJ	VR201
9	351100-001	1	PN: SCJ628R3 NAS1B00	JK1
10	351099-001	2	XLR (NEUTRIK)	JK202,JK204

JBL JRX118SP/230

COMPONENTS

FINAL ASSEMBLY



COMPONENT PARTS LIST: Final Assembly

Item	Part No.	Qty	Description
1	351032-001	1	PN:TTO-10654-01 Toroid Transformer 120V
2	351044-001	1	Main
3	351086-001	1	JRX118SP Pre PCB
4	351105-001	1	Fuse/PT2 BD
5	351255-001	1	Power Switch
6	352329-001	1	PN:TTO-10655-02 Toroid Transformer 220V

FUSE – PT2 BD

COMPONENT PARTS LIST: Fuse PT2 BD 351105-001

Item	Part No.	Qty	Description	Ref. Des.
1	351109-001	1	200V, 2A	BR2
2	351106-001	2	4700UF/25V 85C	C15, C16
3	351107-001	1	PN: XG275M224VHS2	CXAC18
4	351108-001	1	324UH	L13
5	351111-001	1	7A/250V 5X20MM	F1

Fuse Holder, 351110-001

