# PSW SERIES POWERED SUBWOOFERS OWNER'S MANUAL

PSW1000 PSW1200

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CAUTION: To prevent electric shock, do not remove the grounding plug on the power cord, or use any plug or extension cord that does not have a grounding plug provided. Make certain that the AC outlet is properly grounded. Do not use an adapter plug with this product.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a

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

risk of electric shock to persons.

## GENERAL INSTRUCTIONS

## USE THE CORRECT AC VOLTAGE

Connecting the unit to an outlet supplying a higher voltage may create a fire hazard.

#### HANDLE THE POWER CORD

Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may damage it.

If you do not intend to use your unit for any considerable length of time, disconnect the plug from the AC outlet. Do not place furniture or other heavy objects on the cord, and try to avoid dropping heavy objects upon it. Also, do not make a knot in the power cord. Not only may the cord be damaged, it can also cause a short circuit with a consequent fire hazard.

#### PLACE OF INSTALLATION

Place the unit on a firm and level surface. Avoid installing your unit under the following conditions:

- Moist or humid places.
- Places exposed to direct sunlight or close to heating equipment.
- Extremely cold locations.
- Places subject to excessive vibration or dust.
- · Poorly ventilated places.

Do not obstruct the ventilation slots on the amplifier by placing objects over them, otherwise, the temperature inside the unit may rise, possibly affecting its long-term reliability.

#### MOVING THE UNIT

Before moving the unit, be sure to pull out the power cord from the AC outlet and disconnect the interconnection cords with other units.

#### DO NOT OPEN THE CABINET

To prevent shock hazard, do not tamper with internal components for inspection or maintenance. JBL does not guarantee against performance degradation resulting from any modification. If water, a hairpin, or wire, accidentally enters the unit, immediately extract the plug from the AC outlet to prevent shock and consult an authorized JBL service station. If you use the unit under this condition, it may cause a fire or shock hazard.

#### **CLEANING**

If the unit gets dirty, wipe it with a soft, dry cloth. If necessary, wipe it with a soft cloth dampened with mild soapy water and then with a dry cloth. Never use benzene, thinner, alcohol or other volatile agent, and avoid spraying an insecticide near the unit.

#### For Customers in the UK

Your unit is supplied with the flex which will have either two or three wires, so the following items should be observed to guarantee safety:

#### TWO CORE FLEX

**IMPORTANT.** The wires in this mains lead are colored in accordance with the following code:

Blue – Neutral Brown – Live

As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

The wire which is colored blue must be connected to the terminal which is marked with the letter N or colored black.

The wire which is colored brown must be connected to the terminal which is marked with the letter L or colored red.

### INTRODUCTION

Congratulations on choosing JBL loudspeakers. Their highly accurate, uncolored and balanced sound character will greatly increase your enjoyment of recorded music. We build JBL speakers with careful attention to detail, using only the highest quality materials. They will provide many years of excellent performance.

Our PSW Series rivals the performance of more expensive powered subwoofers. It gives you remarkably accurate and pleasing sound reproduction.

- Amplified Subwoofer:
   Your PSW Series subwoofer
   has both line-level and
   speaker-level stereo inputs for
   versatility and ease of use.
   We've also provided speaker
   output to let you hook-up
   satellite speakers. Adjustable
   level and crossover points let
   you balance the subwoofer with
   your main speakers.
- High Polymer Laminate
  Woofers: Provide tight bass
  and well-defined sound
  reproduction without
  harshness, stridency, or
  listener fatigue.
- High Quality Active
   Equalization Amplifier Circuitry:
   Integrating the acoustic and
   electronic systems into a single
   enclosure enable JBL
   engineers to employ an
   equalizer circuit that extends
   the bass response beyond the
   limitations of a small enclosure.

Acoustically Optimized
 Enclosure: Optimized to
 produce an extended and level
 bass response.

#### CONNECTIONS

CAUTION: Before making any connections to your subwoofer, make sure the power to your entire system is OFF.

#### **AC POWER**

First make sure the Volume Control on the rear panel of your PSW Subwoofer is in the minimum position. Make all connections, then plug the AC cord into a wall socket.

#### **INPUTS**

Your PSW subwoofer has both line-level and speaker-level input connections. Review your receiver/T.V./source amplifier instruction manual to see which outputs your equipment provides, then follow the appropriate instructions below.

"Line Input" - Use the RCA (phono) input jacks labeled "Line Input" when connecting from a line-level device, such as a preamp, crossover, signal processor, or when using any of the line-level outputs on the rear of your receiver/T.V./source amplifier.

If your receiver has a single RCA output for sending the signal to the subwoofer, connect it to both R & L input jacks by using a "y" adapter (not included).

Many stereo/ large screen T.V.s have stereo (R & L) RCA jacks for sending the signal to external audio equipment. Your subwoofer connects to these using both the R & L input jacks. (See Fig. 1)

"Speaker Level Input (from amplifier)" – Use these inputs when connecting to the speaker out (speaker mains) of your receiver/T.V./source amplifier. Run speaker wires from the speaker output terminals (usually coded red and black) on the rear of your receiver/T.V./source amplifier to the red and black input terminals labeled "Speaker Level Input (from amplifier)" on the PSW subwoofer. (See Fig. 2)

## Preparing the speaker level hookup wire

Your JBL dealer can recommend suitable cables, or you can buy wire at most hardware stores. High quality connectors and cable offer consistent performance that does not deteriorate over time. We recommend #16 AWG two-conductor insulated wire as a minimum size. If your PSW subwoofer is more than 30 feet (10 m) from your receiver/T.V./ source amplifier, use larger diameter wire.

## Making the speaker level hookup

- First measure the distance from your receiver/T.V./source amplifier to your PSW subwoofer.
- 2. Next make two hookup wires this length.
- Strip off 3/8" of insulation from both ends of each conductor wire.
- **4.** Twist each set of thin wires into a tightly-bunched spiral.
- Now find a visual difference between the two conductors of each molded pair of speaker wire.

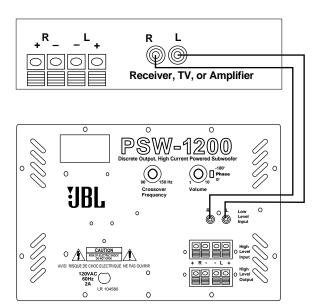


Figure 1: Line Level Input Connection

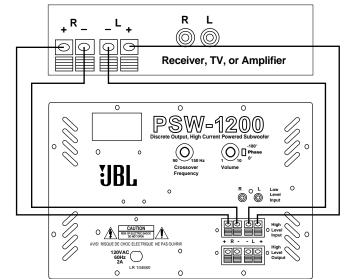


Figure 2: Speaker Level Input Connection

These differences can be a different color wire (copper or "silver"); a strand of yarn in one conductor; thin, raised ribs on one part of the outer insulation; or a printed "+" marking on one of the insulators. It doesn't matter which of the two strands of wire go to (+) and (-) on your receiver/T.V./ source amplifier and PSW subwoofer, just be sure to connect both left and right hookup wires identically. Push down on the button below the terminal and insert the wire through the hole. For each channel, connect the red terminal on the receiver/T.V./ source amplifier to the red or (+) loudspeaker connection terminal on the PSW subwoofer, and the black to the black or (-). Connecting the PSW subwoofer this way ensures that both channels will be in phase; that is, working together, not in opposition.

CAUTION: Never attach inputs to both line level and speaker level inputs of the same channel at the same time.

#### **OUTPUTS**

Your subwoofer has a speaker output terminal block to enable the signal to be sent to your main speakers or satellites. Your PSW subwoofer can use the signal from your receiver/T.V./source amplifier to produce the low bass while passing the unaltered signal source to the external speakers. "Speaker Level Output (to external speakers)" – Hook up the external speakers using two-conductor insulated wire following

the same procedure described under Speaker Level Input.
Connect the red (+) terminal of the PSW subwoofer to the red (+) terminal of the external speaker, and the black (–) to black.
Connecting the external speakers this way ensures that they will be in phase; that is, working together, not in opposition. Connecting the speakers out of phase won't damage them, but will result in less bass and poor imaging.
(See Fig. 3)

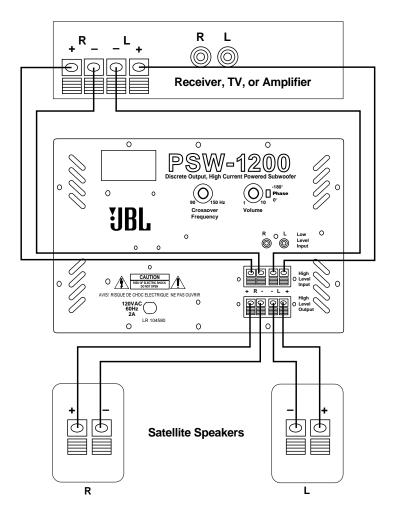
NOTE: Connecting your satellite speakers through your PSW subwoofer won't change their impedance.

#### **LEVEL**

NOTE: When first setting up your PSW subwoofer, set the Volume control counterclockwise to "Min" (minimum) before plugging in the power cord.

Use the "Volume" knob to add the appropriate amount of bass to your main speaker output. Increase the subwoofer level by turning volume knob clockwise until you find a setting that is pleasing to you.

Figure 3: Speaker Level Output Connection



#### **CROSSOVER FREQUENCY**

Use the crossover frequency knob to adjust the upper end of the subwoofer's frequency response. The crossover control determines the highest frequency your subwoofer will reproduce. It allows a seamless transition from subwoofer to satellite speakers. When using small satellite speakers (without much low end), you want the crossover frequency more toward the upper end (150 Hz) to fill in the sound your satellites can't reproduce. When using larger main speakers, a setting more towards the 90 Hz end gives a smoother transition from your PSW subwoofer to your main speakers. Experiment until you find a setting that meets your satisfaction.

Your PSW subwoofer turns itself off internally. For extended periods of non-use (i.e., vacations, etc.) you may wish to unplug the PSW subwoofer.

**PLACEMENT** – CAUTION: Do not place your PSW subwoofer next to heaters, furnaces, or any other heat sources. Be sure not to pinch or compress the power cord.

Since the low frequencies produced by your PSW subwoofer are non-directional, the placement of your subwoofer is not critical. You may place it under an end table, next to the wall, next to T.V., anywhere you would like. However, the closer the subwoofer is to walls, the more bass will be realized. Corner placement will result in maximum bass output.

Use the **POLARITY** switch to maintain proper acoustic summation with the main speakers. Listen to your PSW subwoofer and main speakers with the switch on "0°", then listen to the same material with the switch on "180°". Decide which way sounds better and leave the switch in this position. You should repeat this procedure if you move your PSW subwoofer to another part of the room.

#### **ALC PROTECTION CIRCUITRY**

Your PSW series amplifier has a built-in Automatic Level Control circuitry that comes on automatically when subjected to high input signal levels. It helps to protect the subwoofer driver from being damaged by accidental misuse, assuring you of many years of excellent performance.

#### **GENERAL CARE**

Use a damp cloth for cleaning your PSW subwoofer cabinet. Do not use detergents or other cleaners.

TROUBLESHOOTING / SERVICE Your PSW subwoofers should only be serviced by an authorized JBL repair station. Woofers are replaceable by repair station only. Do not remove the amplifier from the cabinet. There are no userserviceable parts inside.

Before seeking service for your PSW subwoofer, please recheck all connections as outlined in this manual. Verify that your AC wall power source is working properly by checking with another appliance.

Specifications	PSW1000	PSW1200
Amplifier Power (RMS)*	100 Watts	120 Watts
Low Frequency	10"	12"
Voice Coil Diameter	2"	2"
Cone Material	High Polymer Laminate	High Polymer Laminate
Inputs	Line Level & Speaker Level	Line Level & Speaker Level
Outputs	Full Range Speaker	
Crossover Frequency (Continuously Variable)	90 -150 Hz	90-150 Hz
Frequency Response (–6 dB)	30 Hz to (90-150 Hz)**	23 Hz to (90-150 Hz)**
External Dimensions (Inches) Height Width Depth	11-1/2" 18" 16-3/4"	13-1/2" 21-1/4" 16-3/4"
External Dimensions (mms) Height Width Depth	292 mm 457 mm 426 mm	342 mm 540 mm 426 mm
Weight (each) Shipping Weight	36 lbs 16.4 kg 42 lbs 19 kg	43 lbs 19.5 kg 49 lbs 22.3 kg

<sup>\*</sup> ALC circuit defeated.

JBL continually strives to improve its products. New materials, production methods and design refinements are introduced into existing models without notice as a routine expression of our design philosophy. For this reason, PSW Series loudspeakers may differ in some respect from their published specifications and descriptions, but will always equal or exceed the original specifications unless otherwise stated.

<sup>\*\*</sup> Determined by crossover setting.

JBL Consumer Products, Inc. 80 Crossways Park West Woodbury, NY 11797

8500 Balboa Blvd. Northridge, CA 91329

800.336.4JBL (4525)

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