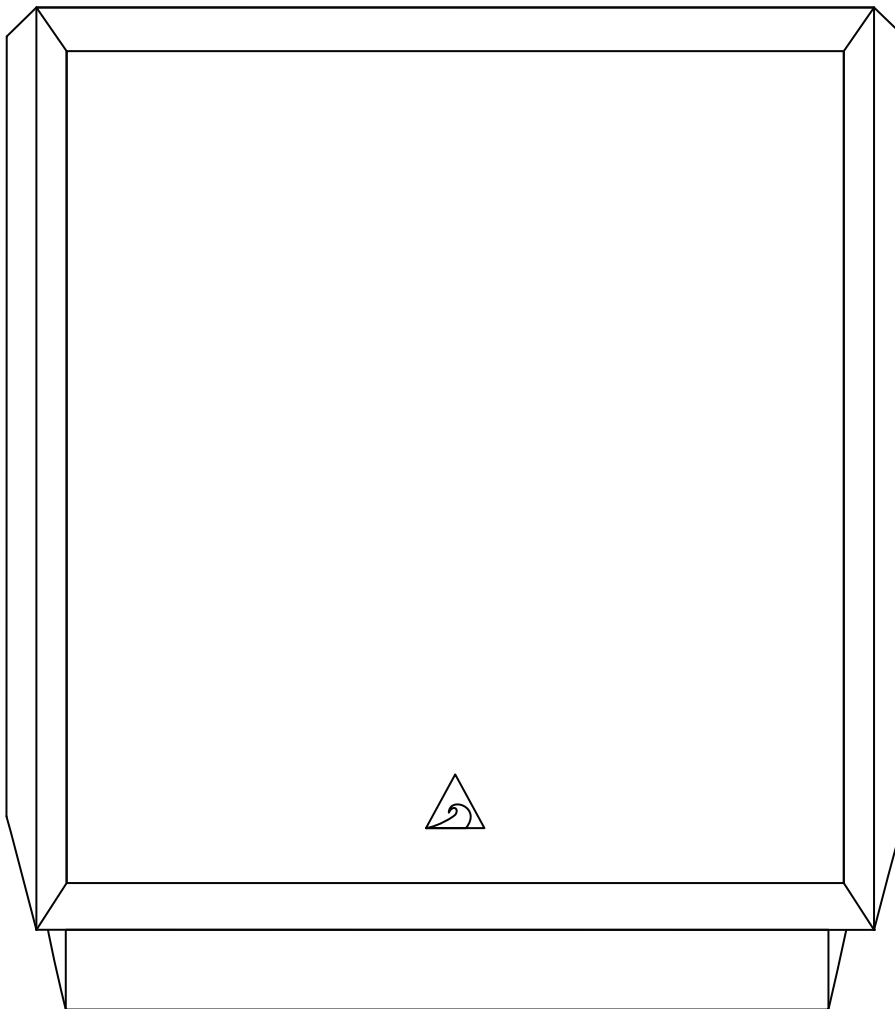


**Model SBT-1000
& SBT-500**
High Performance
Powered Subwoofers



Atlantic
TECHNOLOGY

Instruction Manual

Safety Precautions



CAUTION: To reduce the risk of electric shock, do not remove the cover (or back). No user serviceable parts inside. Refer to qualified personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. This device generates a fair amount of heat. Make sure nothing blocks the ventilation openings on the top and bottom of the unit.



The lightning flash with arrowhead, within an equilateral triangle, alerts the user to uninsulated “dangerous voltage” within the product enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle alerts the user to important operating maintenance or servicing instructions in the literature accompanying the appliance.

For Future Reference

Record your speaker and amplifier serial numbers and date of purchase here:

Model Number _____

Serial Number _____

Date of Purchase _____

The serial number is found on the back panel.

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Model SBT-1000 & SBT-500

High Performance Powered Subwoofers

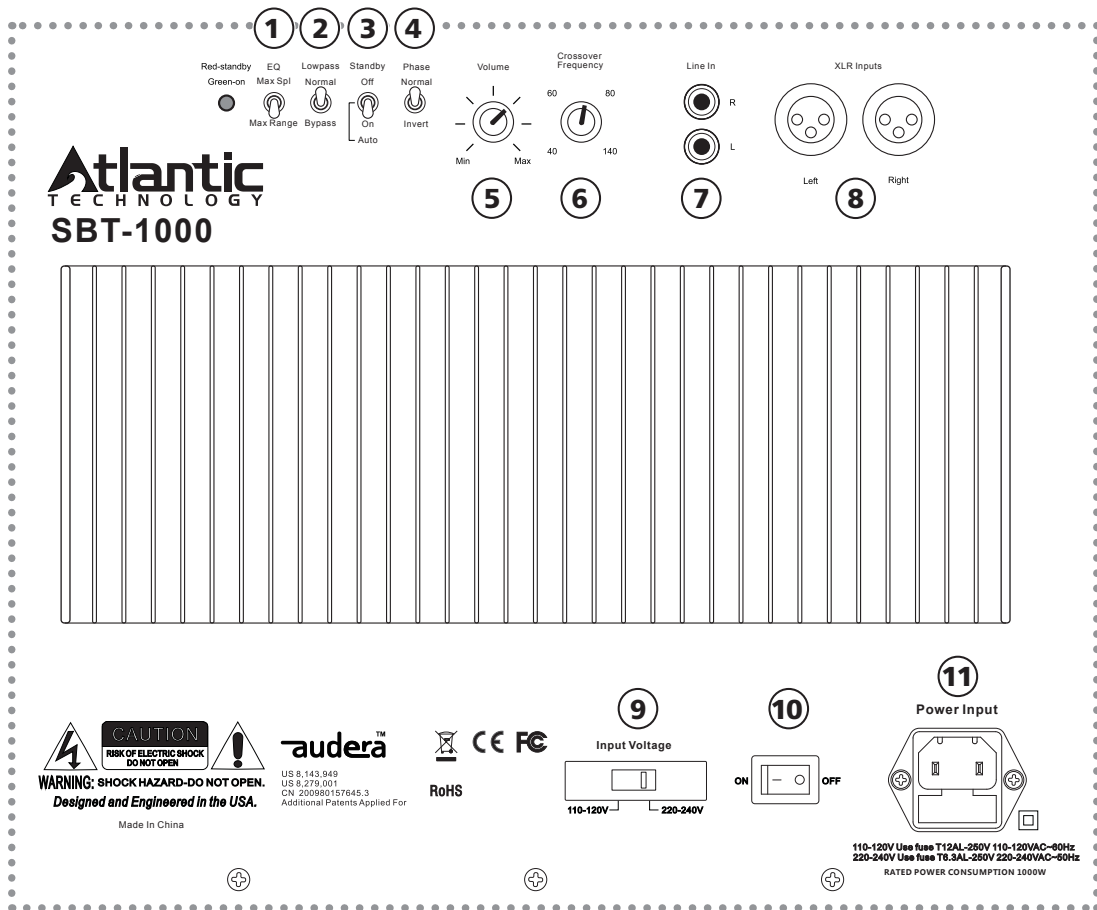
Congratulations on your purchase of an Atlantic Technology powered subwoofer. A well designed subwoofer, properly integrated into your system, will enhance your listening pleasure dramatically by providing the bass foundation upon which most music and special effects are built.

These subwoofers are capable of delivering very high output levels and wide dynamic range. When properly placed, either will provide smooth deep bass response extending to 20Hz.

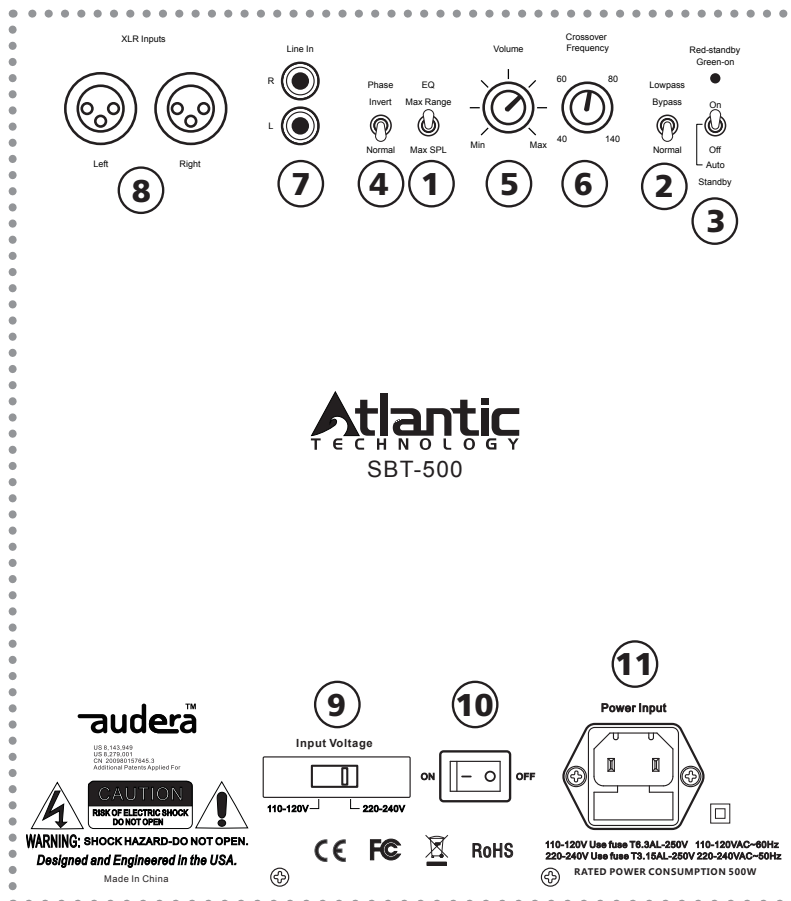
The proprietary high-efficiency amplifier are conservatively rated at 500 and 1000 watts RMS. Each amplifier drives dual long-throw woofers (either 10-inch or 12-inch size) in a robust enclosure for accurate deep bass with very low distortion.

The Lowpass adjustment allows your Atlantic Technology powered subwoofer will blend smoothly with the main loudspeakers.

SBT-1000



SBT-500



1 EQ – Max SPL or Max Range

The Max SPL position provides stronger overall output with restricted very deep bass output. The Max Range position provides deeper bass extension with restricted maximum overall output.

2 Low Pass

NORMAL position: The Low Pass control sets the upper frequency limit of the subwoofer. **BYPASS** position: For a THX sub output signal or another external signal source with its own low pass equalization.

3 Standby Switch

OFF position: The subwoofer is OFF.

ON position: The subwoofer is ON.

AUTO position: The subwoofer turns on in response to an audio signal. It turns off after a period of silence.

4 Phase Switch

Set for stronger output in the narrow frequency range covered by both the satellites and the subwoofer.

5 Volume

Sets the overall output of the subwoofer.

6 Crossover Frequency (Low Pass)

Sets the upper frequency limit of the subwoofer.

7 Line In

Left and Right channel RCA jacks for connecting the stereo or mono subwoofer signal output of a preamp/receiver or other signal source.

8 XLR inputs

These jacks accept XLR signal cables, which provide greater resistance to the intrusion of hum or noise over long signal cable lengths.

9 110/220V Switch

Voltage switch for use in different countries. This switch will be set when you receive the unit. Change this setting only when you are sure your application requires it. For US, the switch should be set to the 110-120V position.

10 Main Power

Set to OFF if the subwoofer is not going to be used for an extended period of time (more than two to three weeks).

11 AC Power Input

Use the included power cord to connect your amplifier to a wall outlet.

Features

Your Atlantic Technology powered subwoofer has been engineered using the latest technology and finest components available.

- **Dual long-throw composite cone bass drivers, each with a vented motor structure and high temperature, 4-layer voice coil.**

This powerful driver design has a very stiff cone that acts like a piston throughout its operating range. Its massive magnetic motor assembly and high temperature component parts deliver exceptional performance and reliability.

- **The sturdy enclosure design delivers low distortion and extended deep bass output.**

As with all Atlantic Technology subwoofers, we have paid close attention to providing accurate musical bass reproduction along with terrific special effects.

- **High-efficiency 500 and 1000 watt amplifiers.**

The output stages are capable of very high current delivery for exceptional driver control. The digital design ensures cool operation. Each amplifier has been precision matched and equalized to its specific driver. The result is powerful, controlled bass with great articulation and authority.

- **An adjustable (40Hz to 140Hz) @ 24dB per octave low pass crossover.**

The steep 24dB per octave slope allows for much better blending with the satellite speakers while making the woofer less localizable.

Note: If you are using a surround processor or receiver that includes its own low-pass subwoofer output (or a THX-certified processor/receiver), set the subwoofer crossover control to the Bypass position.

- **A Phase Invert switch (normal/invert).**

This switch allows better acoustic matching with satellite speaker systems. Be sure to try the Phase switch in both positions when you set up your subwoofer. If you hear increased bass output in one position, leave the switch in that position.

- **Automatic standby operation**

The Automatic Standby function features signal sensing turn-on with 7-10 minute turn-off delay. A switch allows your choice of "Always On" or "Automatic Standby-Off" positions.

Connecting Your Subwoofer

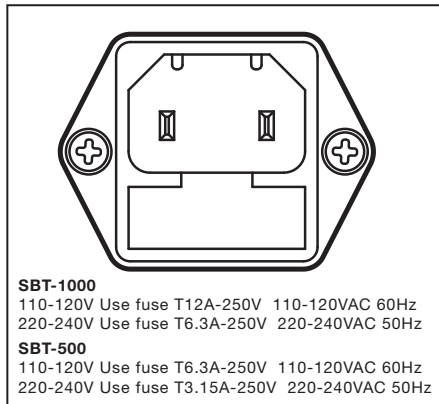
Use the low-level (RCA jack) subwoofer line out of your surround sound receiver/processor. Simply connect your subwoofer with a high quality shielded cable as shown in the diagram on the opposite page. Please consult your processor/receiver manual for further information.

Warning: To prevent risk of electrical shock or damage to your equipment, always unplug all component AC cords before proceeding with speaker and component connections! The last step in wiring your system should be plugging in the AC cords!

Power Connection

Connect the power cord to an AC outlet only after making all other connections to the subwoofer. This will avoid any chance of accidentally activating the subwoofer while wiring.

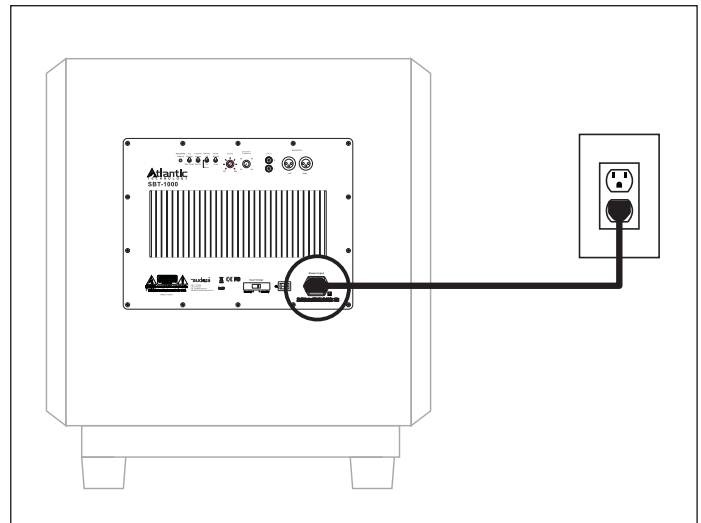
Atlantic Technology does not recommend plugging the subwoofer into the switched outlet of an amplifier, preamplifier, or receiver. The power demands of the subwoofer amplifier may exceed the power rating of the switched outlet and may damage the equipment.



Subwoofer Line Out to Low Level In

Run an RCA cable from your receiver's Sub Out jack to either the L (**LEFT CHANNEL**) input jack or R (**RIGHT CHANNEL**) input jack on the back of the powered subwoofer. If your receiver/processor has stereo subwoofer outputs, connect these to the L (**LEFT CHANNEL**) and R (**RIGHT CHANNEL**) jacks on the back of the powered subwoofer.

AC Connection To SBT-1000 (SBT-500 is similar)

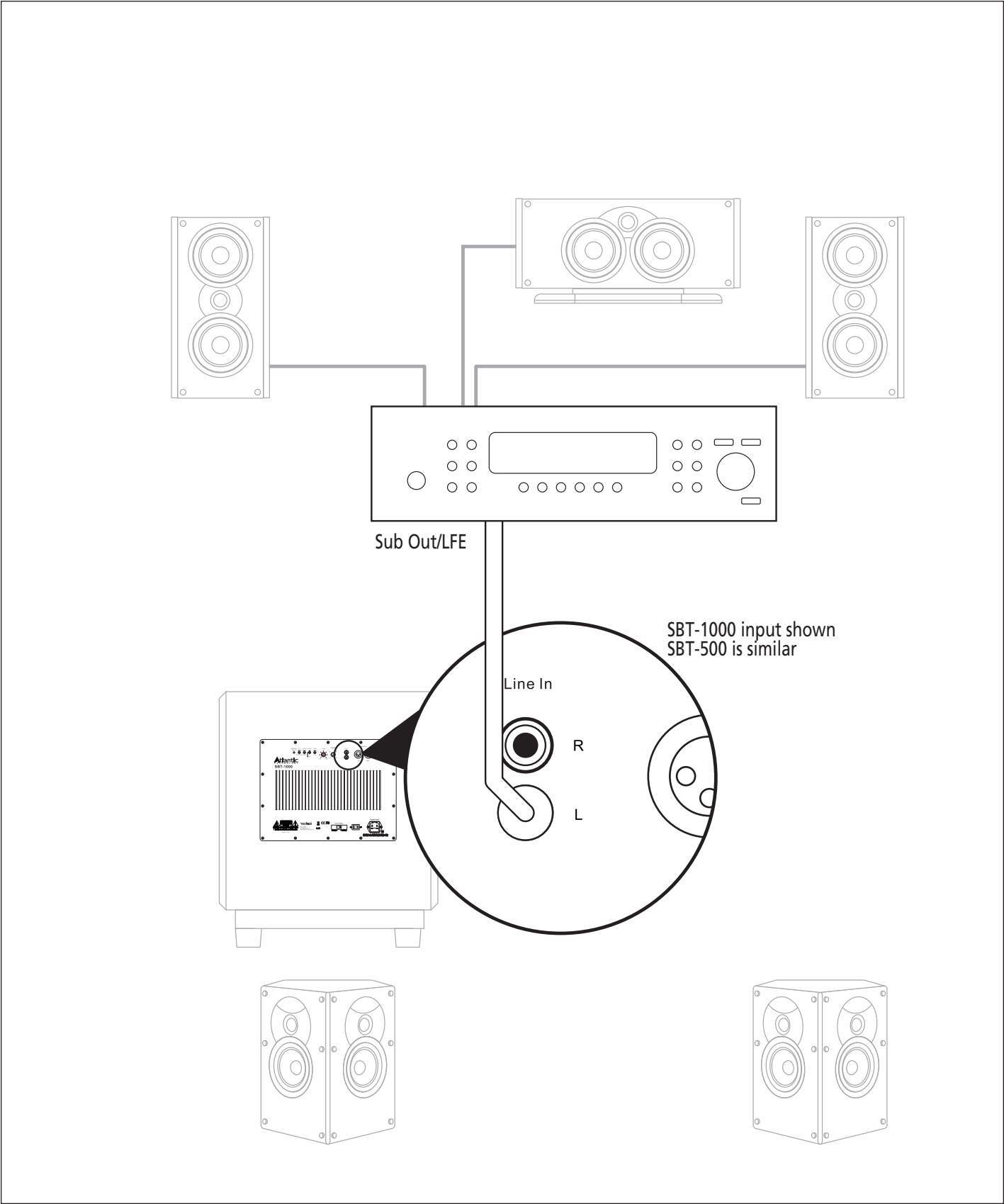


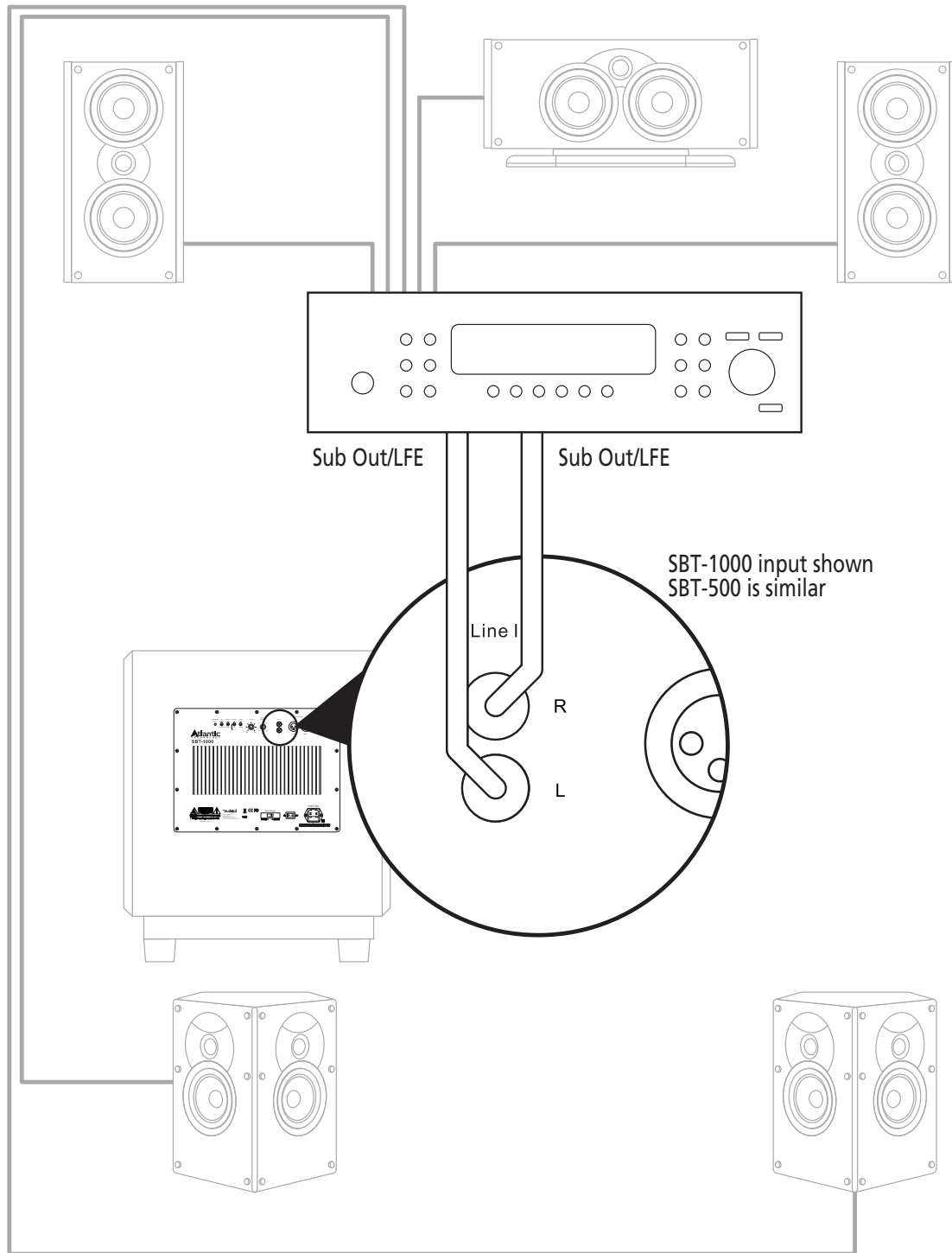
Normal Operation

With the Standby switch in the AUTO position, the subwoofer turns on in the presence of an audio signal from your system. After 7-10 minutes with no audio signal detected, the amplifier enters its low-power draw Standby mode. Standby operation can be bypassed by putting the switch in the ON posi-

tion. The OFF position inactivates the subwoofer. When the sub is on, the power LED located on the amplifier panel glows green. The LED glows yellow in the Standby mode. The LED is dark if the Standby switch is set to OFF.

Low Level Subwoofer Connection

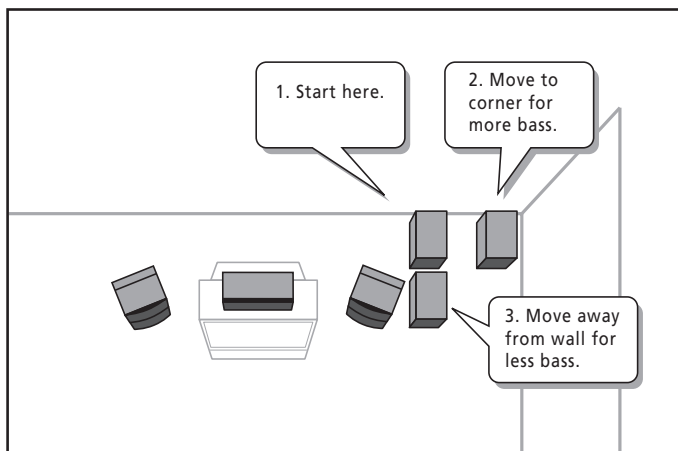




Placement and Operation

Generally speaking, the best location for your new subwoofer is the front of the room, close to a corner (see diagram below). The closer the subwoofer is placed to a wall and especially a corner, the stronger the bass response.

A Helpful Hint: A useful experiment is to place the subwoofer right at the prime listening position. Move your couch or chair out of the way and put the sub in its place. Then play music with strong, consistent bass content. Walk around the room, listening to the subwoofer's bass output. When you locate a site with ample bass, you've found a good site for the sub. In most rooms, this will be near a corner.



System Set Up

When setting up a complete home theater, we recommend that you use a Sound Pressure Level meter. SPL meters are available starting at around \$35. To use this meter, turn on your system, put the Processor/Receiver in the Test Mode and set its main volume control to 0dB. Sit in the prime listening position, set the SPL meter to the 70dB scale, Slow Response, and C Weighting. Now, holding the meter pointed up and in front of you, let the system cycle its test tone from speaker to speaker and set every speaker to 75dB using the individual level settings in the Processor/Receiver. Use the main Volume control on the subwoofer to achieve a balance with the main speakers, then use the processor to fine tune the bass output.

Try watching several different movies and keep in mind that the goal is to have a system that sounds like you're actually "in the movie." Should you have difficulty achieving the correct subwoofer volume this way or should your Processor/Receiver not have a subwoofer level control, just use the subwoofer's volume control to set the balance. If you decide not to use an SPL meter, try to set all the speaker levels the same using the Test Tones.

Subwoofer Tuning Without Aides (SPL Meter or Test Tones)

Start your listening with the subwoofer Lowpass control set at 80Hz (or in the Bypass position if you're using a component with a built-in low-pass output). Set the phase switch to normal and the Volume control to the "12 o'clock" position. If possible, have another person be ready to adjust the subwoofer level control in response to your direction.

Play some music you know has consistent bass content. From your normal listening position, determine whether the subwoofer is filling in the bass of the music evenly. If adjustment is necessary, adjust the subwoofer level up or down.

Once you have achieved a good balance between the subwoofer and the main speakers, have someone flip the Phase switch between its two settings. Listen for a subtle difference in output. Use the stronger position, regardless of whether it is "in phase" or reversed. If the Phase switch results in increased output after setting the subwoofer level control, readjust the level control for best balance between the main speakers and the subwoofer.

How Much Bass Is Enough?

Sometimes people prefer more bass impact for movies. Using the bass level you prefer for movies while listening to music can result in overpowering and unnatural bass reproduction. You may need to determine a "movie" level and a "music" level. If this is the first time you have balanced a subwoofer with a main system, it's easy to set the subwoofer to play too loudly. The Home Theater Police will not arrest you. You might find you back off on the sub output after a week or two of use.

Using the Subwoofer Low Pass Control

When used with the complete Atlantic Audio System 4400, the subwoofer's low-pass control should be set at around 80Hz (unless you are using a processor with its own built-in crossover). The low-frequency response of the System 4400 satellites has been optimized to work with approximately an 80Hz crossover point. Higher crossover frequencies pass more bass but can sound boomy and may be more easily localized to the subwoofer.

A higher crossover frequency setting than 80Hz may be suitable, however, when using very small satellites that have no real low frequency performance. Settings lower than 80Hz should be employed if you are using larger main speakers with extended bass response. The subwoofer should only produce the very lowest bass that is below range of the main speakers.

Consult the manufacturer's specified low frequency response for your main speakers to determine an approximate low pass setting on your subwoofer.

The Phase Invert Control

A switch that reverses the phase of the subwoofer is provided on the amplifier panel. Listen to a monaural musical source with strong, consistent bass content while someone else flips this switch. The switch only affects the narrow range of bass output that is shared between the "upper end" of the subwoofer's output and the "lower end" of the main speaker's output. Leave the switch in the position that has stronger output. Then fine tune the subwoofer's low pass and volume adjustment.

It is possible you will not hear a difference between the two settings of this switch. If you do not hear a difference, it indicates your main speakers and subwoofer are not precisely "in-phase" or "out-of-phase" at the narrow range of bass covered by both speakers.

If so, just use the low pass and volume adjustments to set the subwoofer balance.

A Word About Bass, Center Channel Modes and System Set Up
Many surround processors and receivers feature a "Wide" and "Normal" mode for the center channel speaker. Atlantic Technology recommends that the center channel be operated in the "Normal" mode when using a powered subwoofer. The center channel speaker will sound more dynamic and the intelligibility of the system will generally be improved when in the "Normal" mode.

With discrete digital "5.1, 6.1, or 7.1" channel systems (Dolby Digital, DTS, etc.), many controllers provide a Bass Management option, which lets you set the front and rear speakers in a limited bandwidth (Small) or full range (Large) mode. When using a subwoofer with Atlantic Technology speakers we recommend setting such a controller to the Small position for all the speakers in the system.

Care of Your Subwoofer

Atlantic Technology subwoofers are constructed from thick Medium Density Fiberboard. MDF is a non-resonant material ideal for speaker system enclosures. To clean the cabinet you may use a soft cloth either dry or slightly dampened with clean water. Be careful not to wet the cabinet or allow any water to enter the cabinet seams. Avoid placing your speakers in direct sunlight or near a source of heat that may, over time, damage the finish.

IMPORTANT: Save The Carton Assembly!

Save all packing materials until you are certain the system has suffered no damage in shipment. If you find such damage, either visible or internal, contact your dealer immediately for the proper return procedure. If at all possible, save the carton assembly. There is no substitute should you need to move or ship your subwoofer for any reason.

Subwoofer Troubleshooting Guide

Once your subwoofer is set up, you should have many years of maintenance-free enjoyment from your system. However, if you should encounter a problem, refer to the following guide to help you find the solution. If a problem persists, you should contact your local authorized Atlantic Technology dealer.

Problem	Possible Cause	Possible Solution
No bass output	AC power cord unplugged or plugged into a non-working outlet.	Plug into a working outlet.
	Input cables not securely connected or defective.	Check all connections, then try another input cable.
Audible buzz or hum	Input cable not securely connected or defective.	Check all connections, then try another input cable.
	Ground loop through antenna or cable TV system input.	Test by disconnecting antenna or cable input leads. If hum goes away, install isolation balun(s) at that point.

Subwoofer Specifications

Shared Features	Auto signal sensing on/off/bypass Continuous 40–140Hz adjustment with 24dB/octave lowpass Absolute phase invert switch Variable low level stereo input			High efficiency tracking amplifier 2-inch, four-layer aluminum voice coil Vented pole motor structure XLR inputs			
	SBT-1000			SBT-500			
Bass Driver X 2	12" long-throw composite cone			10" long-throw composite cone			
Output Power	1000W RMS			500W RMS			
Distortion (amplifier)	<0.5%			<0.5%			
Frequency Response	20Hz – 300Hz ±3 dB (Max Range) 27Hz – 300Hz ±3 dB (Max SPL)			23Hz – 300Hz ±3 dB (Max Range) 29Hz – 300Hz ±3 dB (Max SPL)			
Low Level (line)	20k Ohms			20k Ohms			
Peak Output (2500 cu. ft.)	107dB SPL			107dB SPL			
Dimensions		W	H	D	W	H	D
	inches	22.4 x	22.9 x	22.4	18.5 x	18.8 x	18.5
	mm	568 x	581 x	568	470 x	477 x	470
Weight	110lbs/50kg			66lbs/30kg			
AC Power Compatibility	110VAC 50/60Hz & 240VAC 50/60Hz			110VAC 50/60Hz & 240VAC 50/60Hz			

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