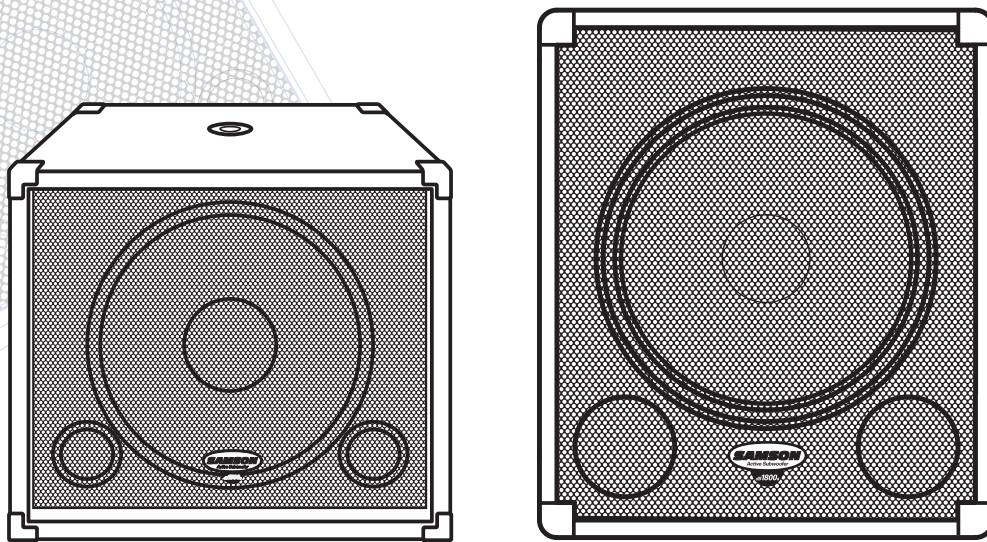


# ***dB1500a***

# ***dB1800a***



**1000 WATT POWERED SUBWOOFER**

## **Owners Manual**

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# Introduction

Thank you for purchasing the dB1500a or dB1800a Subwoofer by Samson. The dB1500a and dB1800a are self-powered subwoofers featuring 15" for the dB1500a and 18" for the dB1800a heavy duty drivers, complemented by a 1000 Watt power amplifier. The dB1500a and dB1800a also offer an active stereo crossover providing a high-passed output for running your satellite speakers. Solid 3/4 inch plywood construction, steel corners, tough carpet covering and larger casters make the dB1500a and dB1800a road warriors. In fixed installation systems, the dB1500a and dB1800a provide super tight low frequency output in a relatively small, unobtrusive enclosure. The dB1500a and dB1800a are perfect add-ons to your dB500 and Expedition system, or for any sound reinforcement system where extended low-end is desired. While using your dB1500a or dB1800a, you'll have great low-end anywhere.

In these pages, you'll find a detailed description of the features of the dB1500a and dB1800a subwoofers, as well as a guided tour through their front and rear panels, step-by-step instructions for their setup and use, and full specifications. You'll also find a warranty card enclosed—please don't forget to fill it out and mail it in so that you can receive online technical support and so we can send you updated information about these and other Samson products in the future.

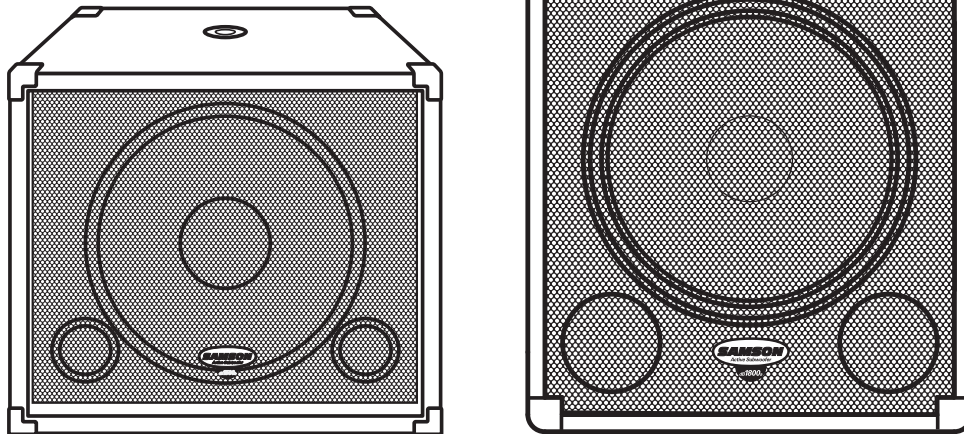
With proper care and adequate air circulation, your dB1500a or dB1800a will operate trouble free for many years. We recommend you record your serial number in the space provided below for future reference.

Serial number: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

Should your unit ever require servicing, a Return Authorization number (RA) must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for a Return Authorization number prior to shipping your unit. Please retain the original packing materials and if possible, return the unit in the original carton and packing materials.

## dB1500a and dB1800a Features



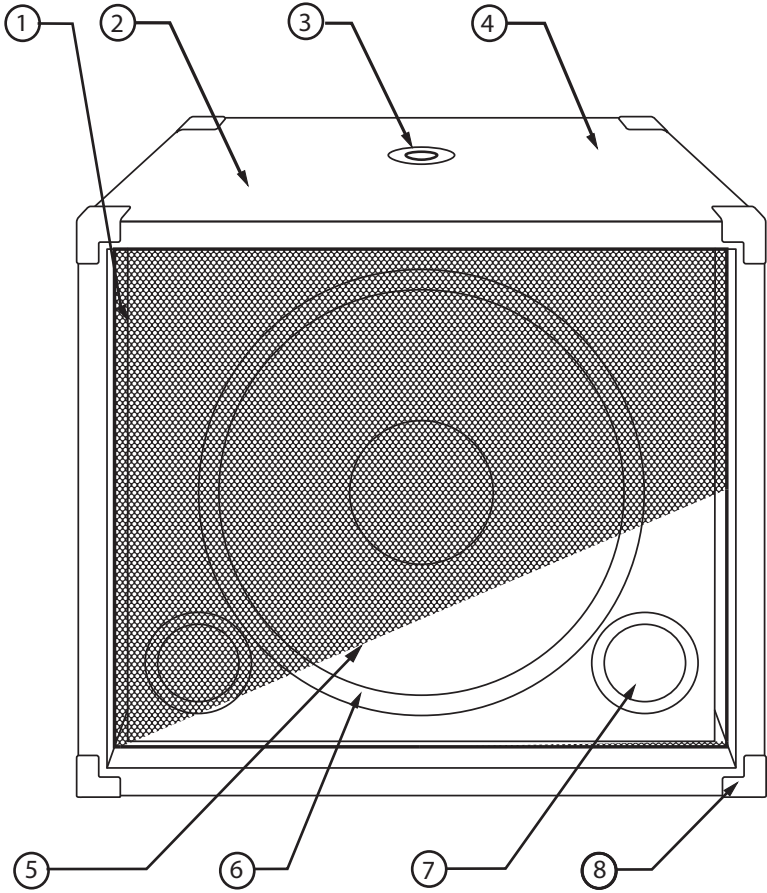
The Samson dB1500a and dB1800a Powered Subwoofers utilize the latest technology in loudspeaker and power amplifier design. Here are some of their main features:

- Heavy-duty, 15" for the dB1500a and 18" for the dB1800a Low Frequency Transducer With Butyl Rubber Surround
- Built-in 1000 Watt Power Amplifier
- Balanced High Pass Outputs for Satellite Speakers
- Variable Crossover 30 - 200 Hz
- Stereo / Mono Operation Switch
- Volume Control
- Heavy-Duty, Rear Mounted Casters
- Extra Large Grab Handles
- 35mm Pole Mount Receptacle
- Heavy-Duty, Steel Grill
- 3/4" Plywood Construction, internally braced and covered in tough carpet
- Three-year extended warranty

# Controls and Functions

ENGLISH

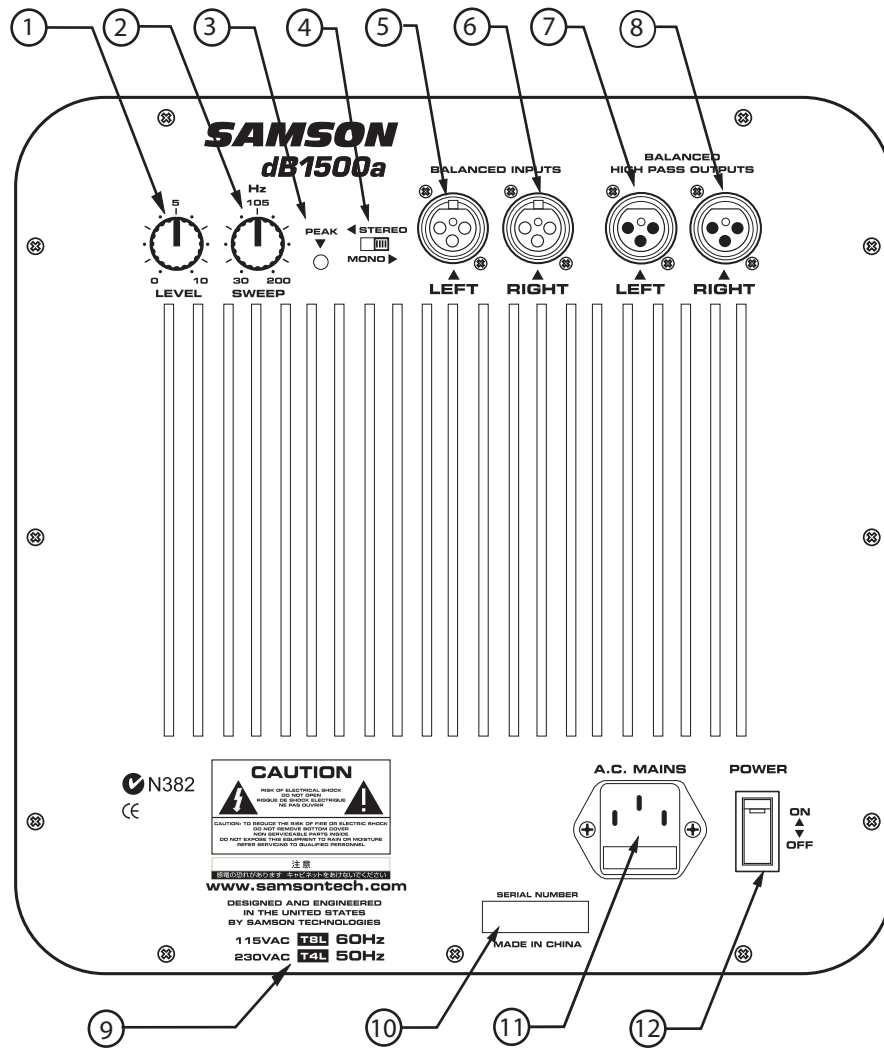
## Front Panel Layout



- 1 **GRILL SCREEN** - Tough steel construction provides durable and stylish protection for speaker.
- 2 **ENCLOSURE** - Rigid 3/4" Plywood Construction.
- 3 **POLE MOUNT** - 1 3/8 inch (35mm) standard speaker stand receptacle.
- 4 **FINISH** - Tough road-proof carpet.
- 5 **TRANSDUCER** - Heavy Duty 15" extended range low frequency driver .
- 6 **BUTYL RUBBER SURROUND** - Assures maximum excursion while maintaining tight bass response.
- 7 **TUNED PORTS** - Quiet port design offering linear extended low frequency response.
- 8 **CORNERS** - Heavy Duty Steel corners.

# Controls and Functions

## Rear Panel Layout



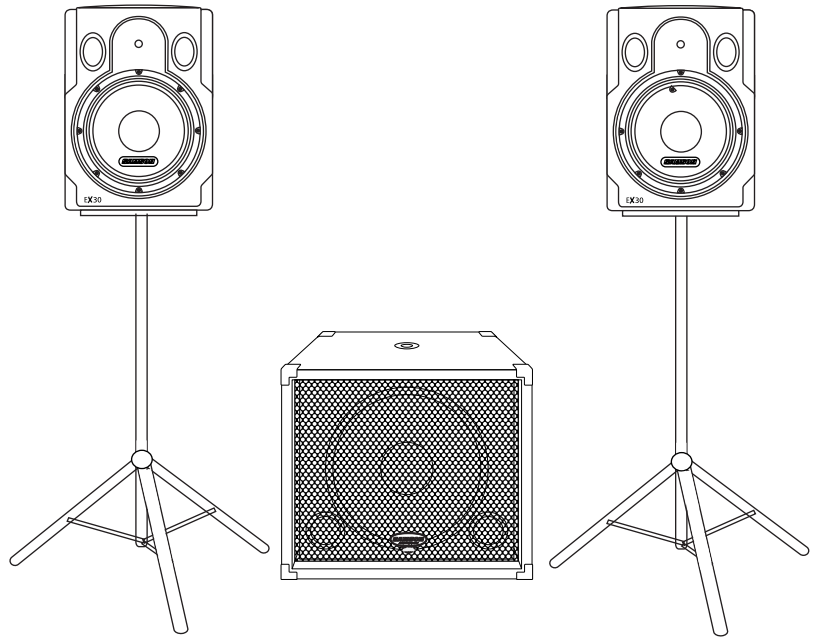
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| <p><b>1</b> <b>LEVEL</b> - Controls the amount of output volume.</p> <p><b>2</b> <b>SWEEP</b> - Adjusts the low frequency end range of the High-Pass outputs.</p> <p><b>3</b> <b>PEAK LED</b> - Illuminates when the input signal is overloading the power amplifier.</p> <p><b>4</b> <b>STEREO/MONO SWITCH</b> - Selects stereo or mono operation.</p> <p><b>5</b> <b>LEFT INPUT</b> - Balanced XLR Input.</p> <p><b>6</b> <b>RIGHT INPUT</b> - Balanced XLR Input.</p> | <p><b>7</b> <b>LEFT OUTPUT</b> - Balanced XLR Output.</p> <p><b>8</b> <b>RIGHT OUTPUT</b> - Balanced XLR Output.</p> <p><b>9</b> <b>VOLTAGE INDICATION</b> - Designates AC input voltage.</p> <p><b>10</b> <b>SERIAL NUMBER</b> - Unit serial number is located here.</p> <p><b>11</b> <b>AC INLET</b> - Accepts Standard Power Cord.</p> <p><b>12</b> <b>MAINS POWER SWITCH</b> - Activates the dB1500a power amplifier.</p> |
|--|---|

# Configuring Your Speaker System

Before you start plugging in cables, you should take a minute to decide how you want to interface your new subwoofer. There are several ways you can interface the dB1500a and dB1800a, however most systems set-ups fall into two categories, Stereo or Mono (Common) sub operation.

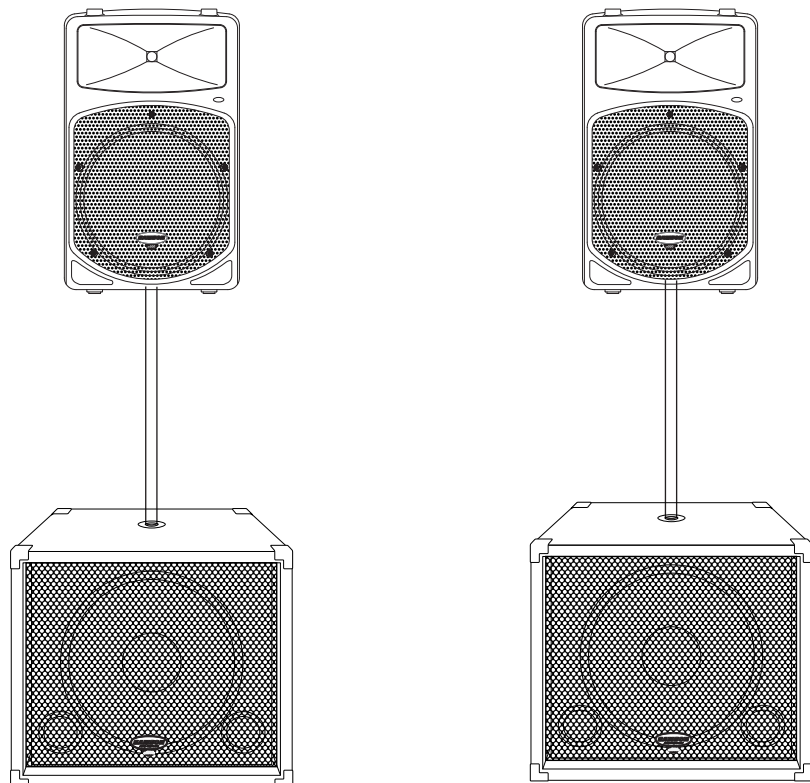
## Common Sub Operation

In most cases a common sub, or mono bass operation is desired. This is true for several reasons, but mostly because low frequencies produced by a subwoofer tend to be non-directional. Since low frequency waves take so much space to actually develop, you can't tell if the sub bass is coming from the left or right side, unless of course you're in a very large room. Because of this phenomena, just about all sub bass material is mixed in mono.



## Stereo Sub Operation

In larger rooms, as well as in theatres and theme park installations (for low frequency special audio effects), two dB1500a and dB1800a's can be used in stereo.



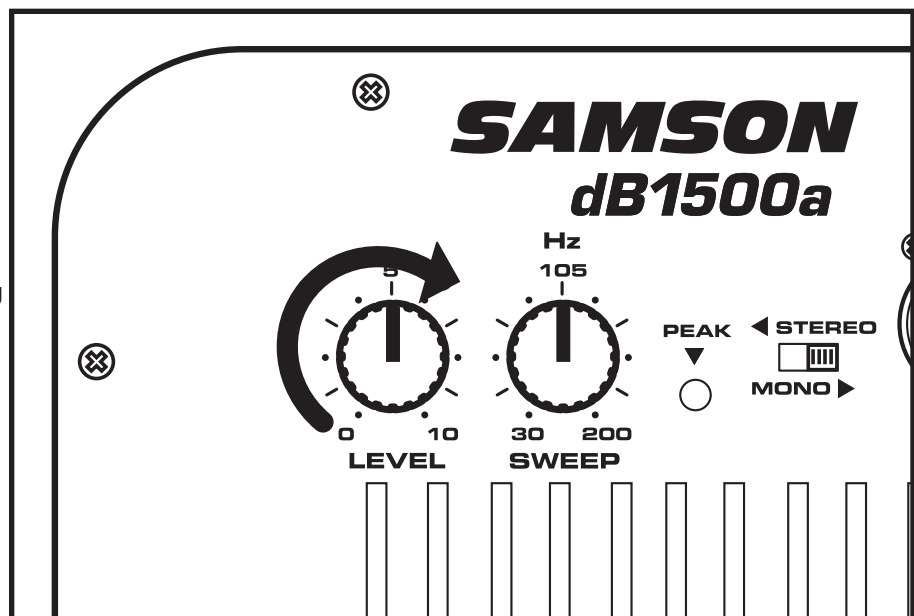
# Operating the dB1500a and dB1800a

## dB1500a and dB1800a CONTROL PANEL

The dB1500a and dB1800a's control panels provide the connections and user interface to the dB1500a and dB1800a's internal electronic crossover and power amplifier section. The internal amplifier is a 1000 Watt amplifier capable of producing incredible bass output while running super cool. The dB1500a and dB1800a employ an electronic crossover that adjusts the high frequency cutoff point for the subwoofer, and also, a high passed output for your satellite speakers. You will achieve a tremendous benefit in sound quality by running your satellite speakers from the dB1500a and dB1800a's High-Pass outputs. The reason for this is that when your satellite speaker receives the filtered output from the dB1500a and dB1800a, it will no longer be looking at the frequencies below the crossover point. Let's say your satellite speaker has a natural frequency roll-off at 70 Hz, and you are sending full range signal (as low as 20Hz) to the satellite amplifier and speaker. Even though the speaker can only reproduce 70Hz and up, the amplifier is still outputting 20-70Hz, which is wasted power and essentially turns into heat. By using the dB1500a and dB1800a's High-Pass output, the satellite amplifier and speaker never see the frequencies lower than what's set by the Sweep frequency. This means you'll have more power dedicated to the frequencies you want the satellites to deliver, resulting in a much cleaner sound with more headroom.

### Level Control

The level control is used to adjust the amount of volume from the dB1500a or dB1800a subwoofer. In addition, the Level control will also control the output volume of the high-passed outputs. Therefore, if you are using the dB1500a or dB1800a without using the high-passed outputs (for example, when the dB1500a or dB1800a are connected to an external crossover) the Level control adjusts the low frequency output of the dB1500a or dB1800a. If you are using the dB1500a or dB1800a's internal electronic crossover to run satellite speakers, then the Level control will adjust the overall system volume.



### Sweep

The Sweep control selects the upper range cutoff frequency of the dB1500a and dB1800a's internal electronic crossover. The dB1500a and dB1800a's crossover provides a 12dB per octave Linkwitz- Riley filter curve. The Sweep limits the high frequency that the dB1500a and dB1800a will reproduce, and at the same time, the high-passed output tracks the selected crossover frequency as the lower limit frequency.

### Stereo / Mono Switch

The Stereo/ Mono switch selects either stereo or mono bass operation. When set to MONO, the dB1500a and dB1800a will combine, or sum, the left and right signals and send a mono signal to the amplifier of the dB1500a and dB1800a. In this mode, the original stereo signal is passed through the left and right outputs only now the stereo signal is filtered at the frequency set by the Sweep control. In Stereo mode, the low frequency signal is not summed, and you can choose either the left or right input accordingly for each side of the system.

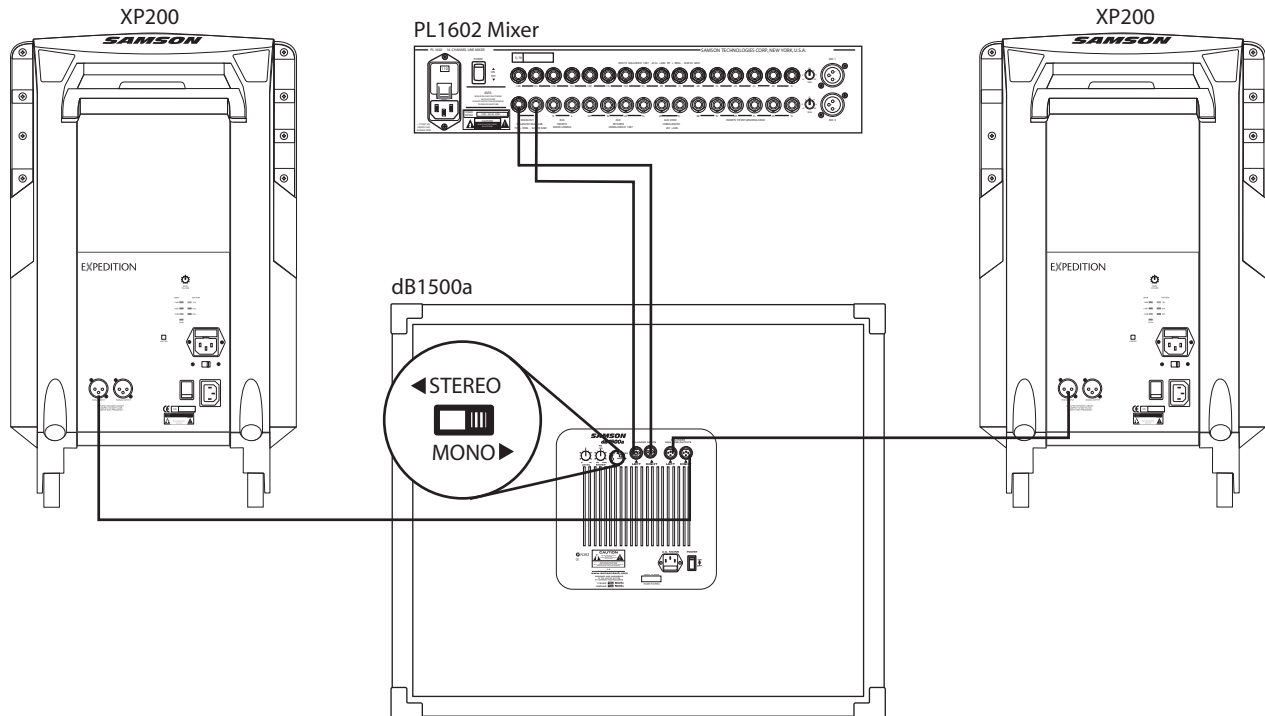
### The In and The Outs

The dB1500a and dB1800a features electronically balanced inputs and outputs so that any possible HUM problems are greatly reduced when interfacing to other equipment. XLR connectors with industry standard pin-outs are used for easy interface from mixer and other professional audio gear. A detailed wiring diagram can be found in the section "dB1500a and dB1800a Connections" on page 11 of this manual.

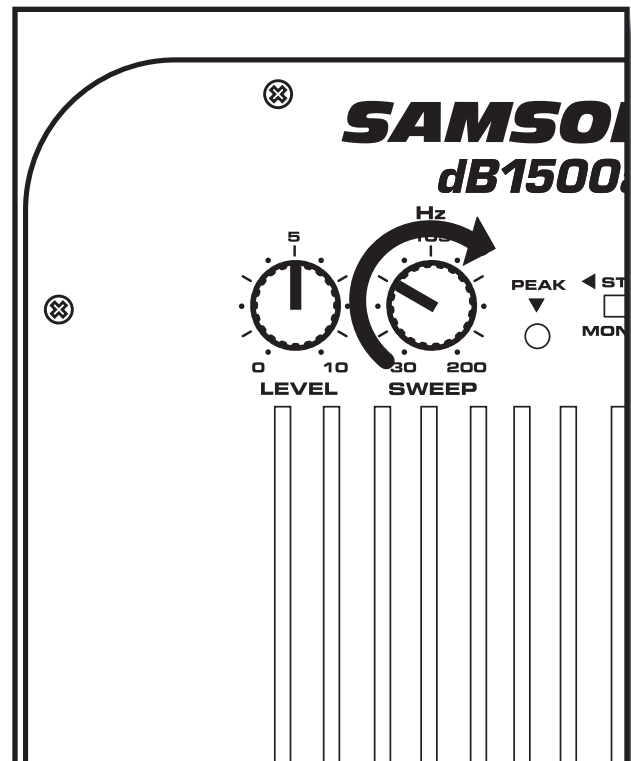
# Operating the dB1500a and dB1800a

## dB1500a and dB1800a MONO SUB WITH POWERED SATELLITES

The dB1500a or dB1800a is a perfect addition to any pair of powered full range enclosures like the Samson dB500a, XP200 and XP300. Below is a typical system set-up using the dB1500a and dB1800a with a mixer and a pair of powered satellite loudspeakers. The dB1500a and dB1800a's input and outputs utilize industry standard XLR connectors. For a detailed wiring diagram, see the section "dB1500a and dB1800a Connections" on page 11. Follow the steps below the diagram to set up your system.



- Connect the mixer's left output to the dB1500a and dB1800a's left input and the mixer's right output to the dB1500a and dB1800a's right input. Now connect the dB1500a and dB1800a's left output to the input of the left side powered satellite, and the dB1500a and dB1800a's right output to the input of the right side satellite. Switch the Stereo/Mono selector switch to the MONO position.
- Now adjust the crossover SWEEP to the desired frequency. For the db500a select 60-80Hz and for the Expedition XP200 & XP300 select 80-100Hz. If you are using another brand of powered speaker as satellites with the dB1500a and dB1800a, consult their respective owners manuals for the recommended crossover point.
- Lower your mixer's master outputs to all the way off. Now set the level of your powered satellites up to the normal operating level. Run an audio signal (like some music from a CD) through your mixer and raise the level to a comfortable listening volume. Next, slowly raise the dB1500a or dB1800a Level control and listen to the low frequency output. Adjust the dB1500a or dB1800a to the level of low frequency output that you like. Now, when you raise and lower your mixer's output, the dB1500a or dB1800a and satellites will track at the same relative volume.

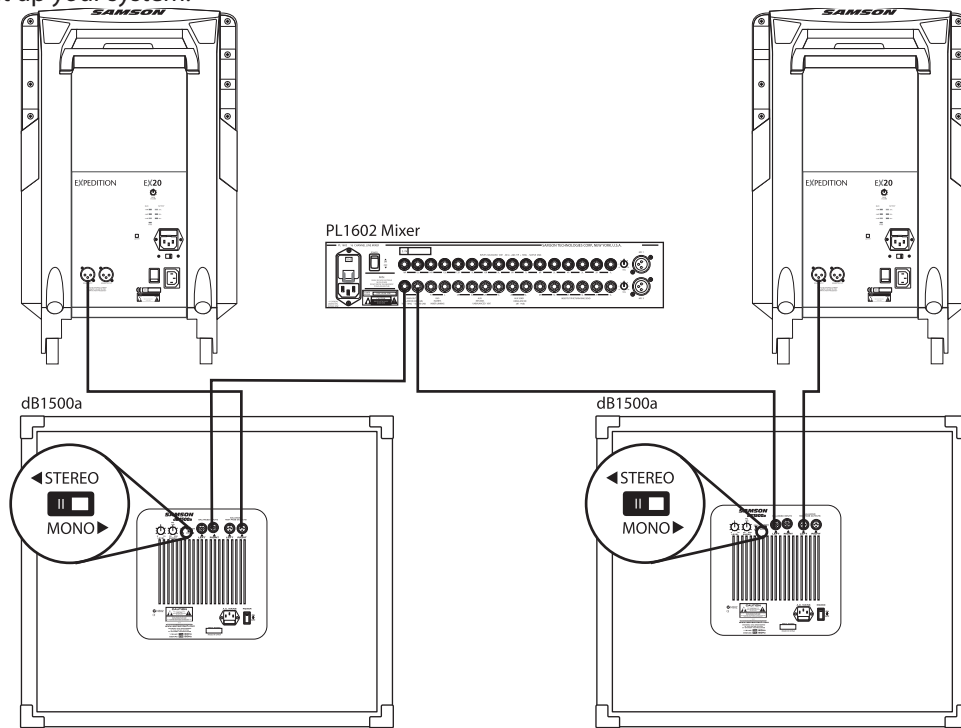




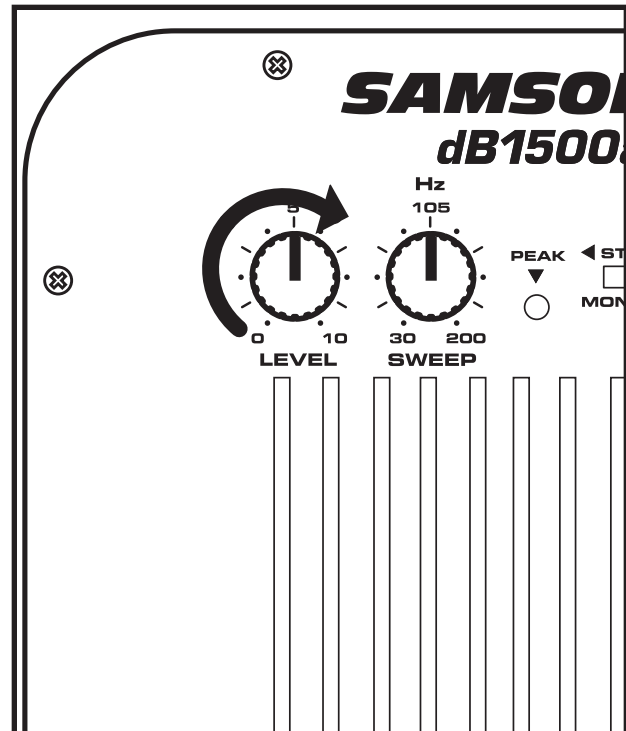
# Operating the dB1500a and dB1800a

## dB1500a and dB1800a STEREO SUB WITH POWERED SATELLITES

Two dB1500a or dB1800a's can be used with any pair of powered full range enclosures like the Samson dB500a, XP200 and XP300. Below is a typical system set-up using two dB1500a and dB1800a's with a mixer and a pair of powered satellite loudspeakers. The dB1500a and dB1800a's inputs and outputs utilize industry standard XLR connectors. For a detailed wiring diagram, see the section "dB1500a and dB1800a Connections" on page 11. Follow the steps below the diagram to set up your system.



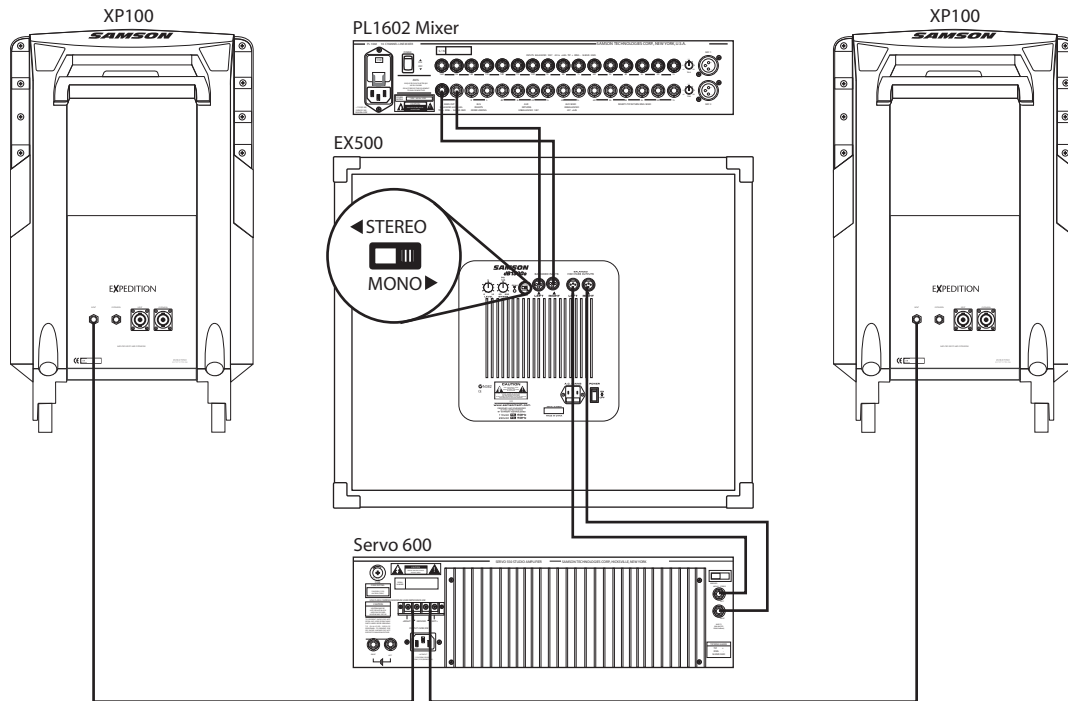
- Connect the mixer's left output to the left-side dB1500a and dB1800a's left input and the mixer's right output to the right-side dB1500a and dB1800a's right input. Now connect the left-side dB1500a and dB1800a's left output to the input of the left powered satellite, and right-side dB1500a and dB1800a's right output to the input of the right satellite. Switch both the Stereo/Mono selector switches to the Stereo position.
- Now adjust the crossover SWEEP to the desired frequency. For the dB500a select 60-80Hz and for the Expedition XP200 & XP300 select 80-100Hz. If you are using another brand of powered speaker as satellites with the dB1500a and dB1800a, consult their respective owners manuals for the recommended crossover point.
- Lower your mixer's master outputs to all the way off. Now set the level of your powered satellites up to the normal operating level. Run an audio signal (like some music from a CD) through your mixer and raise the level to a comfortable listening volume. Now slowly raise the dB1500a and dB1800a Level control and listen to the low frequency output. Adjust the dB1500a and dB1800a to the level to low frequency output that you like. Now when you raise and lower your mixer's output, the dB1500a and dB1800a and satellites will track at the same relative volume.



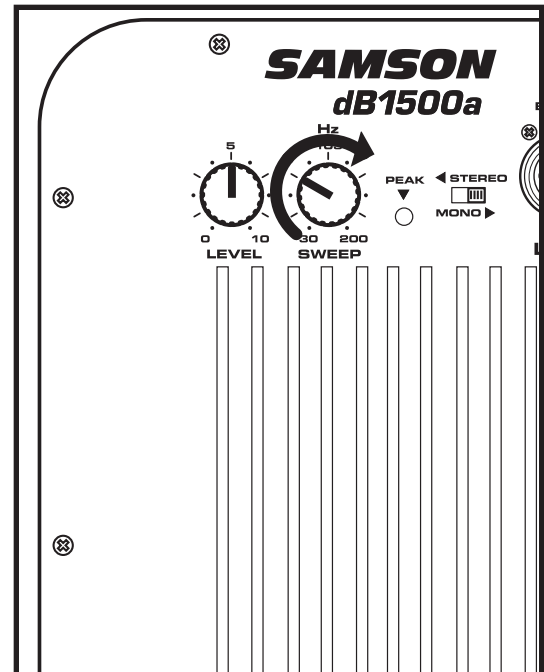
# Operating the dB1500a and dB1800a

## dB1500a and dB1800a MONO SUB WITH PASSIVE SATELLITES

If your system uses a standard stereo power amp and passive full range enclosures, like the Samson dB500 and XP100, the dB1500a or dB1800a is easily interfaced for extended bass. Below is a typical system set-up using the dB1500a and dB1800a with a mixer, stereo power amp and a pair of passive satellite loudspeakers. The dB1500a and dB1800a's inputs and outputs utilize industry standard XLR connectors. For a detailed wiring diagram, see the section "dB1500a and dB1800a Connections" on page 1. Follow the steps below the diagram to set up your system.



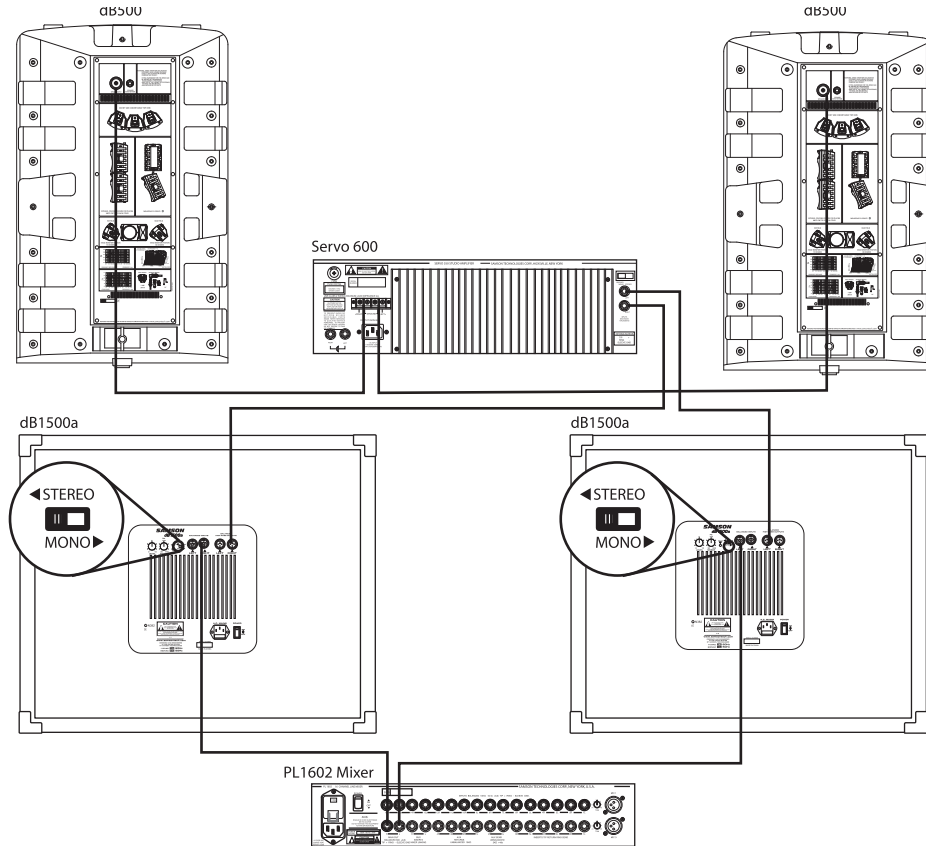
- Lower your mixer's master outputs to all the way off.
- Connect the mixer's left output to the dB1500a and dB1800a's left input and the mixer's right output to the dB1500a and dB1800a's right input. Now connect the dB1500a and dB1800a's left outputs to the left side input of your power amp, and dB1500a and dB1800a's right output to the right side input of your power amp. Run your speaker cables from the power amp's outputs to the left and right satellite speakers. Switch the Stereo/Mono selector switch to the MONO position.
- Now adjust the crossover SWEEP to the desired frequency. For the dB500a select 60-80Hz and for the Expedition XP200 & XP300 select 80-100Hz. If you are using another brand of powered speaker as satellites with the dB1500a and dB1800a, consult their respective owners manuals for the recommended crossover point.
- Set the level of your power amplifiers to the normal operating level. Run an audio signal (like some music from a CD) through your mixer and raise the level to a comfortable listening volume. Now, slowly raise the dB1500a and dB1800a Level control and listen to the low frequency output. Adjust the dB1500a and dB1800a to the level of low frequency output that you like. Now when you raise and lower your mixer's output, the dB1500a and dB1800a and satellites will track at the same relative volume.



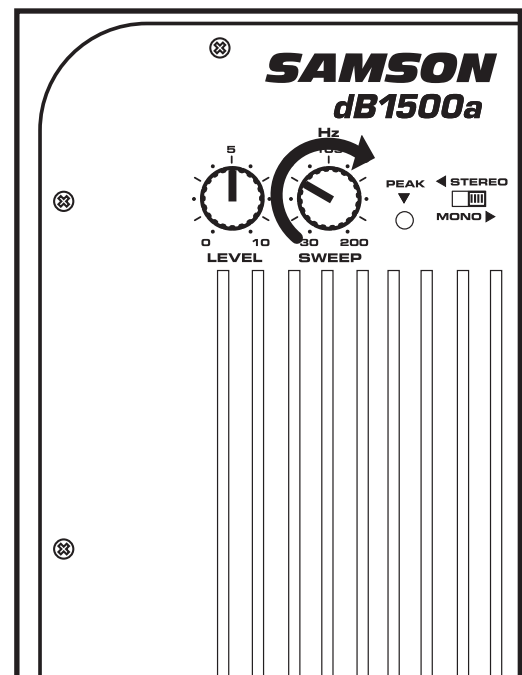
# Operating the dB1500a and dB1800a

## dB1500a and dB1800a STEREO SUB WITH PASSIVE SATELLITES

If your system uses a standard stereo power amp and passive full range enclosures, like the Samson dB500 and XP100, the dB1500a and dB1800a is easily interfaced for extended bass. Below is a typical system set-up using the dB1500a and dB1800a with a mixer, stereo power amp and a pair of passive satellite loudspeakers. The dB1500a and dB1800a's inputs and outputs utilize industry standard XLR connectors. For a detailed wiring diagram, see the section "dB1500a and dB1800a Connections" on . Follow the steps below the diagram to set up your system.



- Lower your mixer's master outputs to all the way off.
- Connect the mixer's left output to the left-side dB1500a and dB1800a's left input and the mixer's right output to the right-side dB1500a and dB1800a's right input. Now connect the left-side dB1500a and dB1800a's left output to the left input of the power amplifier and the dB1500a and dB1800a's right output to the power amp's right input. Run your speaker cables from the power amp's outputs to the left and right satellite speakers. Switch both the Stereo/Mono selector switches to the Stereo position.
- Now adjust the crossover SWEEP to the desired frequency. For the dB500a select 60-80Hz and for the Expedition XP100 select 80-100Hz. If you are using another brand of speakers as satellites with the dB1500a and dB1800a, consult their respective owners manuals for the recommended crossover point.
- Set the level of your power amplifiers to the normal operating level. Run an audio signal (like some music from a CD) through your mixer and raise the level to a comfortable listening level. Now slowly raise the dB1500a and dB1800a Level control and listen to the low frequency output. Adjust the dB1500a and dB1800a to the level of low frequency output that you like. Now when you raise and lower your mixer's output, the dB1500a and dB1800a and satellites will track at the same relative volume.

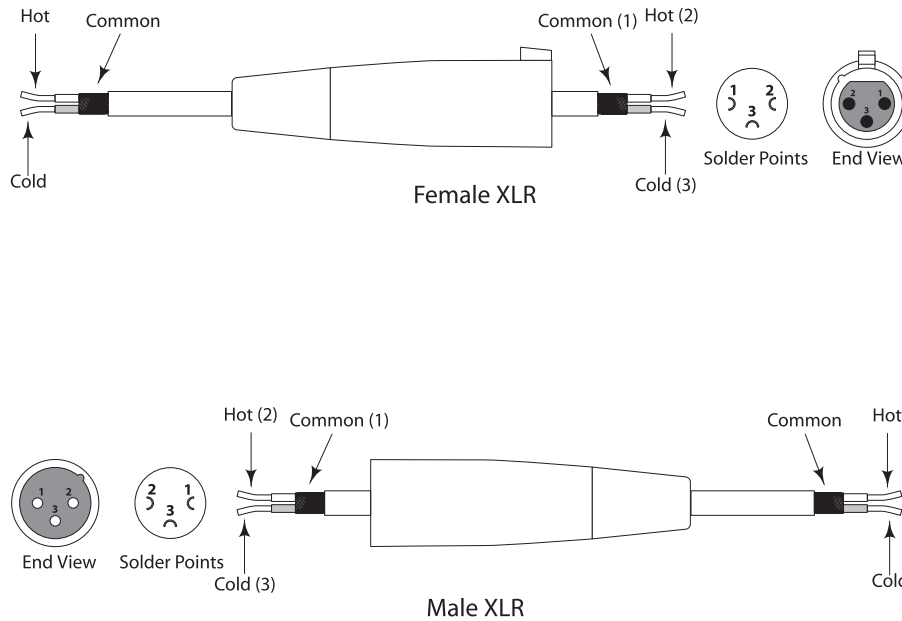


# dB1500a and dB1800a Connections

## dB1500a and dB1800a XLR WIRING DIAGRAM

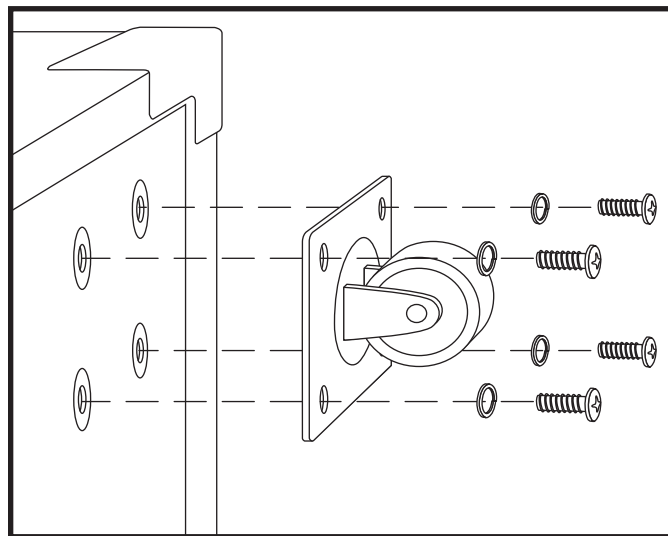
The dB1500a and dB1800a's input and outputs utilize industry standard XLR connectors. Below is a detailed wiring diagram for the dB1500a and dB1800a XLR connectors.

### XLR Balanced Wiring Guide



## CASTER INSTALLATION

- Locate one caster and four each of the supplied screws and lock washers.
- Hold the caster in place and hand start the screws. Be careful to ensure that the screws are on the proper thread chase. **DO NOT PUSH TEE NUT INTO ENCLOSURE.**
- Use a screw driver to tighten the four screws. Be careful not to over tighten the screws.
- Repeat the steps above for the remaining three casters.



## Specifications / Caractéristiques techniques

### Specifications

Transducer:		
dB1500a		15", Heavy Duty Driver, 2.5 inch voice coil, aluminum former
dB1800a		18", Heavy Duty Driver, 3 inch voice coil, aluminum former
Power Rating:		1000 Watts Program, 500 Watts RMS
Frequency response		
dB1500a		30Hz- 300Hz+/-3 dB
dB1800a		20Hz- 240Hz+/-3 dB
Sensitivity:		
dB1500a		94dB SPL @ 1 W/1m
dB1800a		95dB SPL @ 1 W/1m
Input		Balanced
Connector:		XLR - FEMALE
Output		Balanced, high-passed tracking low frequency crossover point
Connector:		XLR - MALE
Crossover Frequency:		Variable 30Hz – 200Hz
Switch Functions		
Stereo /Mono:		Selects stereo or mono low frequency operation
Enclosure		
Construction:		3/4" plywood, carpet covered
Finish:		Black carpet
Corners:		Steel
Casters:		Three Inch Heavy Duty
Mounting:		Integral 1 3/8" (35mm) Pole Mount Receptacle,
Dimensions:		
dB1500a		20" (508mm) H x 24" (606 mm) W x 22.5" (573mm) D
dB1800a		21.5" (545mm) H x 27" (681 mm) W x 23.25" (589mm) D
Weight:		
dB1500a		71 lbs. (32.25K)
dB1800a		80 lbs. (36.29K)

*Specifications are subject to change without notice.*

### Caractéristiques techniques

Haut-parleur :		
dB1500a		38 cm (15 pouce) haute fiabilité, bobine de 2.5 pouces, centre en aluminium
dB1800a		45.7 cm (18 pouce) haute fiabilité, bobine de 3 pouces, centre en aluminium
Puissance admissible :		1000 Watts en crête, 500 Watts efficace
Réponse en fréquence :		
dB1500a		30 Hz- 300 Hz, +/-3 dB
dB1800a		20 Hz- 240 Hz, +/-3 dB
Rendement :		
dB1500a		94 dB SPL à 1 W/1 m
dB1800a		95 dB SPL à 1 W/1 m
Entrée		Symétrique
Connecteur :		XLR - FEMELLE
Sortie		Symétrique, sortie passe-haut au-dessus de la fréquence de coupure du filtre
Connecteur :		XLR - MÂLE
Fréquence de coupure :		Variable de 30 Hz à 200 Hz
Sélecteur		
Stéréo/Mono :		Sélectionne la restitution en mono ou en stéréo des basses fréquences Baffle
Construction :		Contreplaqué de 19 mm, recouvert de moquette
Finition :		Moquette noire
Cornières :		Acier
Roulettes :		Haute résistance de 7,6 cm
Montage :		Embase pour pied intégrée de 35 mm
Dimensions :		
dB1500a		508 mm (H) x 606 mm (L) x 573 mm (P)
dB1800a		545 mm (H) x 681 mm (L) x 589 mm (P)
Poids :		
dB1500a		32,25 kg
dB1800a		36,29 kg

*Les caractéristiques peuvent être modifiées à tout moment sans préavis.*