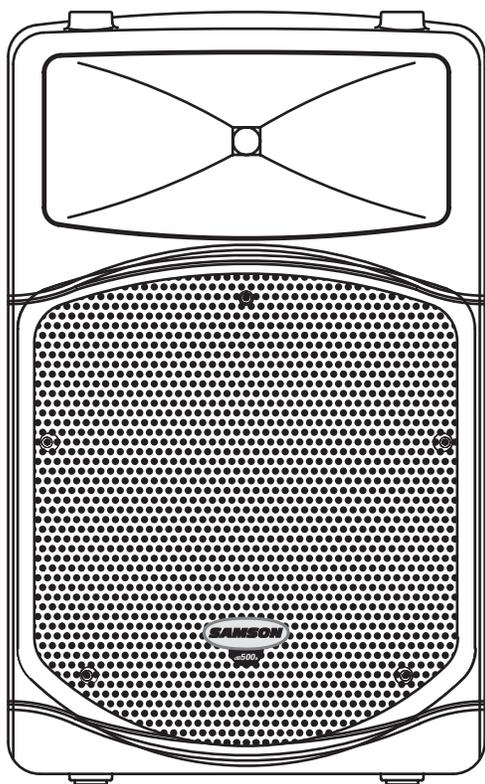


dB500



500 Watt 2-way Loudspeaker

Owners Manual

SAMSON
A U D I O



Safety Instructions

Caution: To reduce the hazard of electrical shock, do not remove cover or back.

No user serviceable parts inside. Please refer all servicing to qualified personnel.

CAUTION
FOR CONTINUED PROTECTION AGAINST RISK
OF FIRE, REPLACE ONLY WITH SAME TYPE FUSE
ATTENTION
UTILISER UN FUSIBLE DE
RECHANGE DE MÊME TYPE

WARNING
DO NOT EXPOSE THIS EQUIPMENT
TO RAIN OR MOISTURE
AVIS
RISQUE DE CHOC ELECTRONIQUE
NE PAS OUVRIR



WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

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

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 product.

Important Safety Instructions

1. Please read all instructions before operating the unit.
2. Keep these instructions for future reference.
3. Please heed all safety warnings.
4. Follow manufacturers instructions.
5. Do not use this unit near water or moisture.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) 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 plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. When the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on and pinched particularly at plugs, convenience receptacles and at the point at which they exit from the unit.
11. Unplug this unit during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified personnel. Servicing is required when the unit has been damaged in any way, such as power supply cord or plug damage, or if liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.

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Introduction

Congratulations on purchasing the Samson dB500! The dB500 speaker system by Samson takes the concept of PA systems to a new level. By combining 500 watts of power handling, advanced crossover design and the highest quality speaker and cabinet components, the dB500 provides studio quality sound for any kind of live application. The monitor features a super heavy-duty, custom designed, 15" Celestion® low frequency driver and a 1.75 inch (44 millimeter) titanium diaphragm high frequency driver on a 1" throat, wide dispersion horn. The dB500 offers crystal-clear audio and an ultra-wide sound field. The top end is clean, smooth and vivid. Not only a front-firing PA speaker, the dB500's are also designed to operate as wedge-style monitors. The cabinet's right and left side panels are joined at different angles, so depending on the side you choose, you get a different dispersion angle, allowing for greater flexibility on stage. Adding to the dB500's practical design is a catalog of mounting options. The compact cabinet can be easily stacked, permanently installed, mounted using the integral 1 3/8" pole mount receptacle or suspended using the ten built-in fly points. With the dB500, setup and break down is quick and easy. Heavy-grade steel grills, scuff-resistant textured finishes and rigid corners offer excellent protection against wear and tear. As fixed sound reinforcement or as a durable, great-sounding road PA, the dB500 monitor is ideal for sound professionals and performers looking for serious output and studio monitor sound quality from a PA speaker system.

In these pages, you'll find a detailed description of the features of the dB500 PA system, as well as a description of its front and rear panels, step-by-step instructions for its 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.

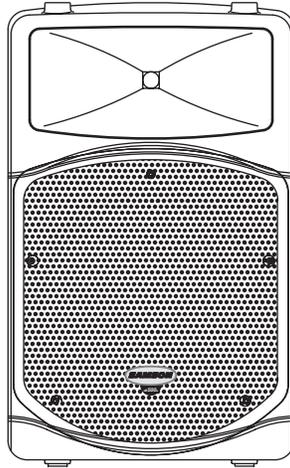
With proper care your dB500 will operate trouble free for many years. We recommend you record your serial number in the space provided below for future reference.

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.

dB500 Features



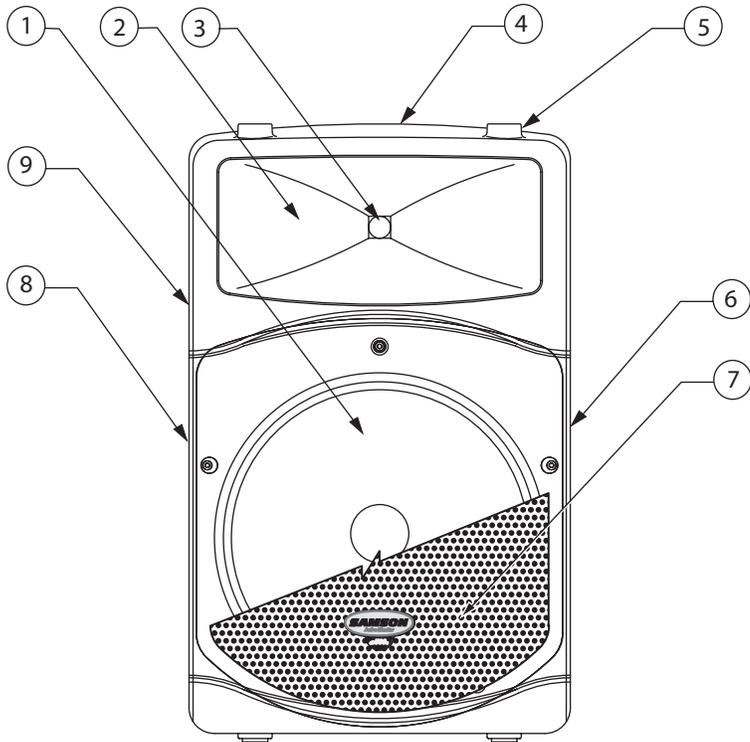
The Samson dB500 two way loudspeaker is an all-in-one solution for live sound. Here are some of its main features:

- Two-way loudspeaker system.
- Standard speaker stand receptacle.
- Custom designed, Celestion, heavy-duty, 15-inch low frequency driver with 2.5-inch voice coil.
- 1" throat, high-frequency compression driver with 1.75-inch titanium diaphragm.
- 500 watt power handling .
- 15 and 30- degree monitor angles.
- Arrayable with 10 fly points.
- Internal 18 dB/octave Butterworth time aligned crossover.
- Rugged, road-worthy construction for high reliability.
- Quality build and rugged construction ensure reliable performance from venue to venue.
- Three-year extended warranty.

dB500 Components

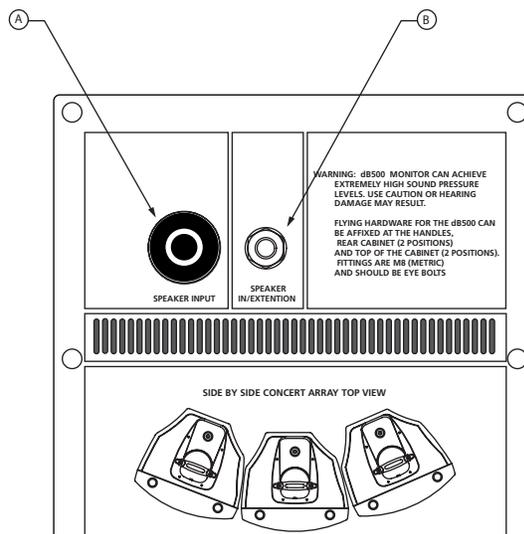
dB500 FRONT PANEL

- ① **15 Inch Driver** – Custom designed Celestion, heavy-duty, 15” low frequency driver provides deep bass.
- ② **Wide Dispersion Horn** – 1 inch throat, 60 x 90 degree wide dispersion horn provides extensive coverage and linear off axis response.
- ③ **Titanium Compression Driver** – 1.75 inch (44mm), titanium diaphragm with 1 inch opening.
- ④ **Handle** – One of three ultra over sized rubber grip carry handles.
- ⑤ **Stacking Bumper** – Gender mating bumpers for stacking dB500’s.
- ⑥ **Handle** – One of three ultra over sized rubber grip carry handles.
- ⑦ **Steel Grill** – Durable steel grill provide protection for, and easy access to LF driver.
- ⑧ **Handle** – One of three ultra over sized rubber grip carry handles.
- ⑨ **Enclosure** – Rugged PVC plastic enclosure.



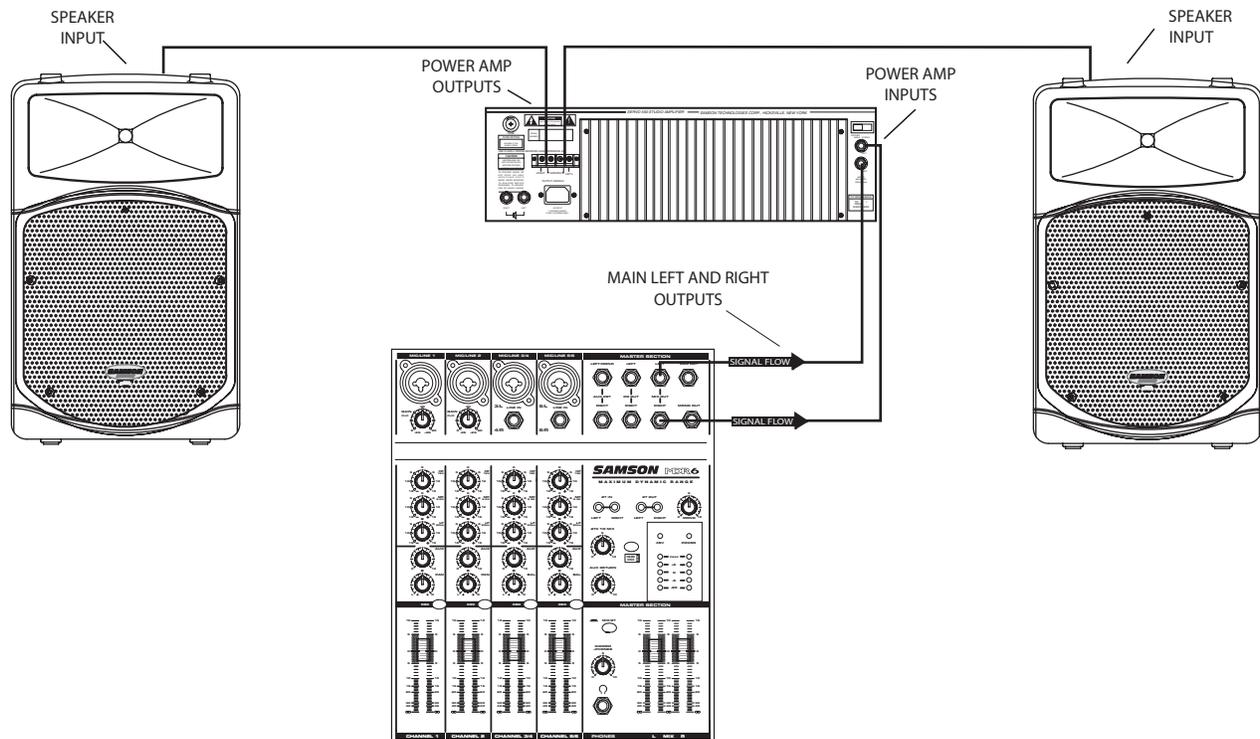
dB500 REAR PANEL

- Ⓐ **SPEAKER INPUT** – Speakon connector for connecting to power amplifier. See page 10 of this manual for a detailed wiring diagram.
- Ⓑ **EXTENSION SPEAKER** – 1/4” parallel output for connecting additional dB500’s.



Quick Set-Up

In the following pages of this manual you will find a detailed explanation of system set-ups, but if you just want to get started quickly you can follow the diagram and steps below to set up a basic stereo PA system.



NOTE: It is important to remember the Golden Rule of audio ... "LAST ON, FIRST OFF". Translated, this means that when turning on your system, you should always turn your power amplifiers or powered monitors on LAST, and when turning your system off, turn your power amps off FIRST. This helps avoid any loud pops caused by inrush current at power up, which can sometimes damage loudspeakers.

- 1 Before connecting your dB500's, make sure that the power of all your systems components is turned off. Also, make sure that your power amplifier volume controls and the main left and right faders of your mixer are turned all the way down.
- 2 Connect the cables to your microphones and instruments, or a CD player, to your mixer.
- 3 Switch on the power of the mixer, instruments and/or CD player, and then switch on your power amplifier.
- 4 While speaking into the mic (or playing the instrument or CD), raise the mixers main Left and Right faders to the "0" position. Be sure that the mixer's output meters are not clipping. If they are, adjust the mixer volumes down until the signal cleans up.
- 5 Now, slowly raise your power amp until you reach the desired listening level.

Controls and Functions

Positioning the dB500

Microphone Positioning - How to Reduce Feedback

Feedback is the annoying howling and squealing that is heard when the microphone gets too close to the speaker and the volume is high. You get feedback when the microphone picks up the amplified signal from the speaker, and then amplifies through the speaker again, and then picks it up again, and so on and so on. In general, it is always recommended that any LIVE mic (a mic that's on) is positioned behind the speaker enclosures. This will give you the best level from your system before feedback. One possible exception is when you are adjusting the sounds of the microphones, since you want to listen in front of the speaker to hear properly. To do this, lower the MAIN VOLUME while setting the EQ and effect from in front of the speakers. Once you have the sound you like, move the microphones to behind the speakers and raise the Main volume.

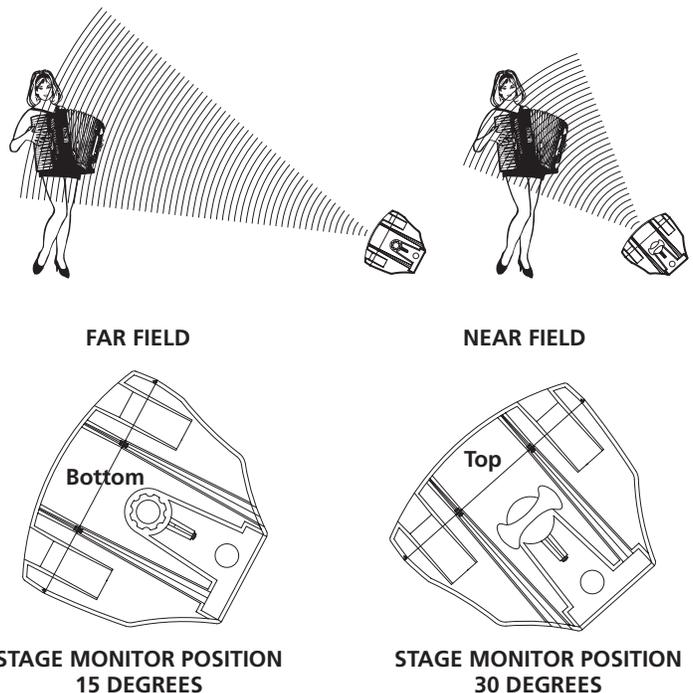
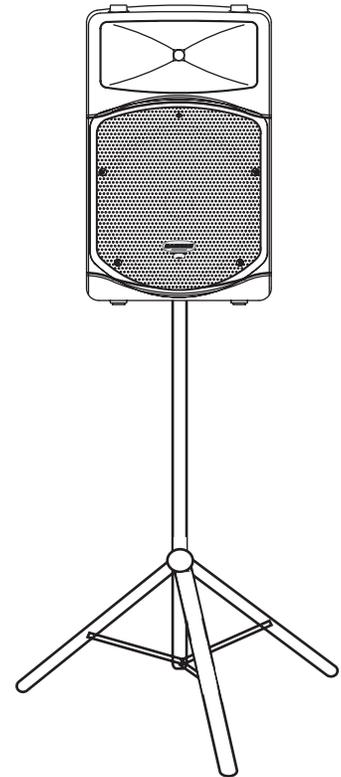
Speaker Placement

Whenever possible it is a good idea to raise the speakers above the heads of the listening audience. The dB500 enclosure features a standard 1 3/8" pole mount receptacle, which are compatible with speaker stands from a variety of manufacturers. In a smaller setting like a school cafeteria, library, or a mall kiosk, you can also use the dB500 in one of the tilt back monitor positions, which will improve the projection of the speakers and may eliminate the need for speaker stands.

Using the dB500 as a Floor Monitor

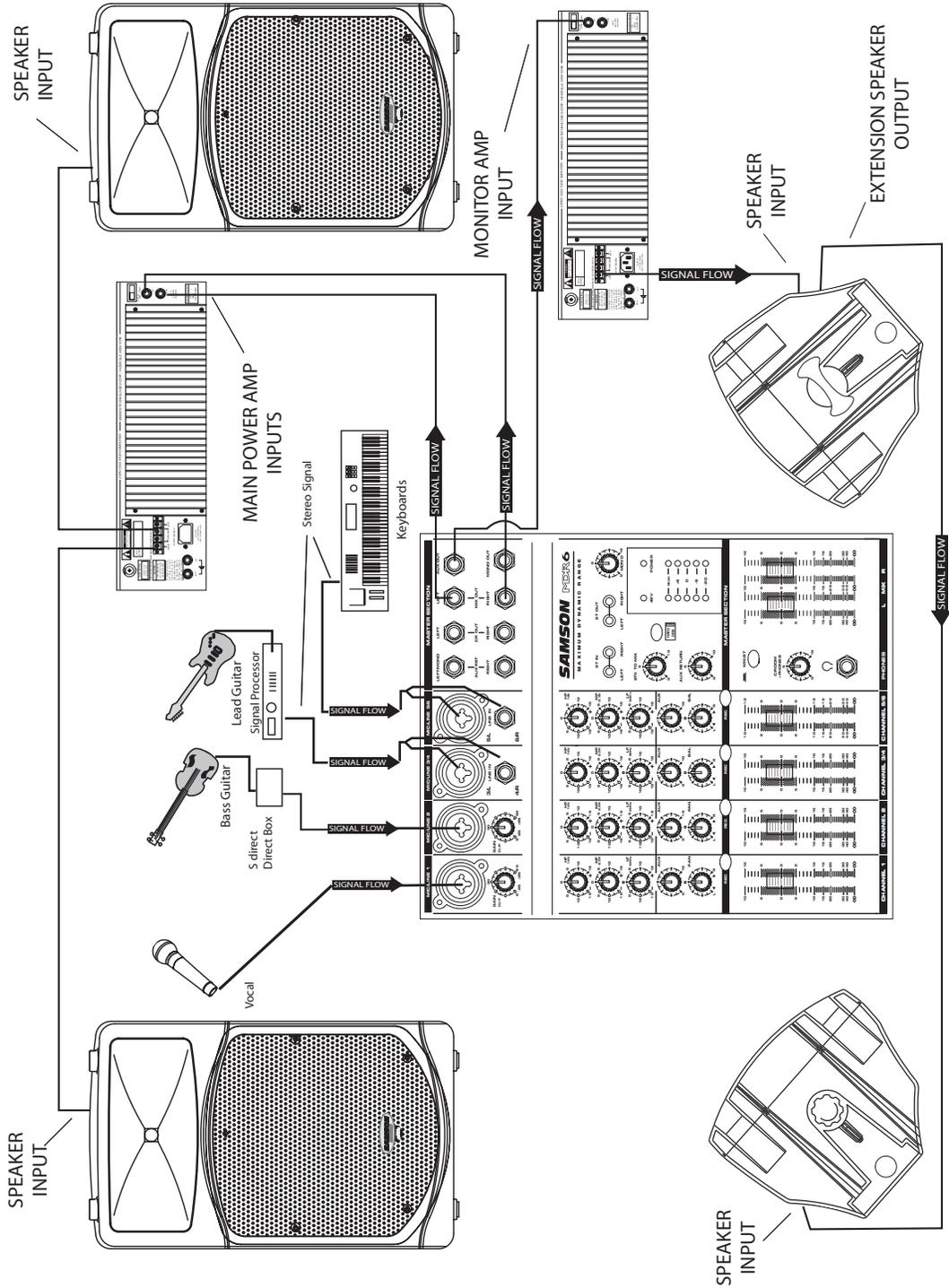
The dB500 is an ideal solution for stage monitoring and thanks to its unique design, two wedge monitor positions are possible. When placed on its side with the high frequency horn facing to the left of the enclosure, the dB500 is tilted at a 15 degree angle optimizing performance when used on a small stage. When placed on its side with the high frequency horn facing to the right of the enclosure, the dB500 is tilted at a 30 degree angle optimizing performance when used on larger stages. In a large stage monitor system, several dB500's can be daisy-chained together using the EXTENSION SPEAKER output.

Note: Be sure to check the manufacturers minimum recommended impedance for your power amplifier to avoid overload and possible damage to both the speaker and amplifier. In many instances when using the dB500 as a monitor system, you may choose to use an external equalizer like the Samson S Curve 131 to increase the volume and reduce the chance of feedback.



Controls and Functions

Setting Up Your dB500 System



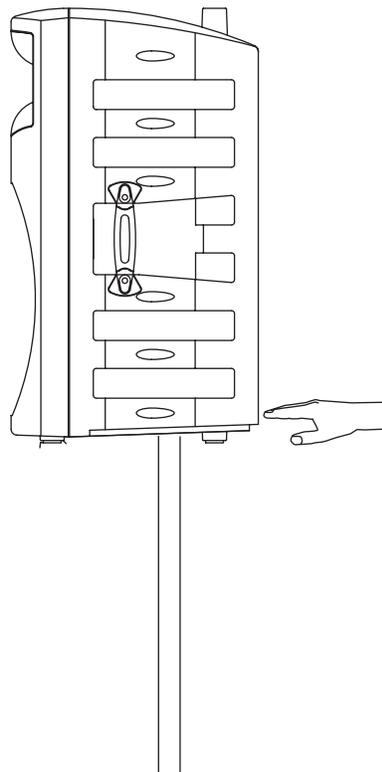
This example shows a typical PA system using mixer with an external power amplifier and a pair of dB500 for the main left and right mix. A separate signal from the mixer's AUX/MONITOR buss is sent to two additional dB500's place in the tilt-back, wedge positions for use as floor monitors. In order to increase the output of the monitor system, the use of an external graphic equalizer like one of the Samson "E" or "S curve" series is highly recommended.

Controls and Functions

Setting Up Your dB500 System

Using Speaker Stands

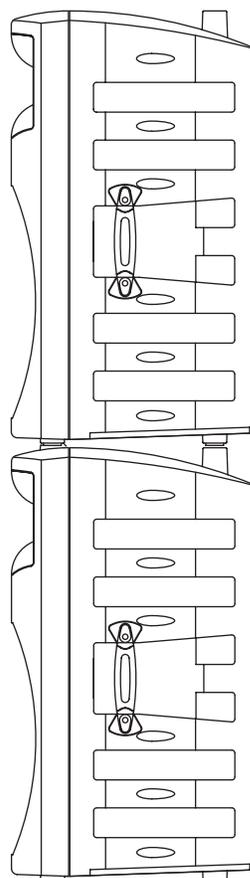
The dB500 enclosure features a standard 1 3/8", pole mount receptacle, which are compatible with speaker stands from a variety of manufacturers. Before installing the dB500 on a speaker stand, loosen the thumbscrew located on the bottom of the rear side of the enclosure. Once installed on the stand, be sure to tighten the thumbscrew to hold the speaker in place. Be careful not to over tighten the thumbscrew to avoid stripping the threads.



Stacking the dB500

The dB500 enclosure incorporates gender mating stack feet and bumpers that allows you to stack one dB500 on top of another. When stacking the dB500's, be certain that the rubber feet from the top unit are securely fastened into the bottom unit's stacking bumpers.

NOTE: DO NOT STACK dB500's OVER TWO (2) TALL.

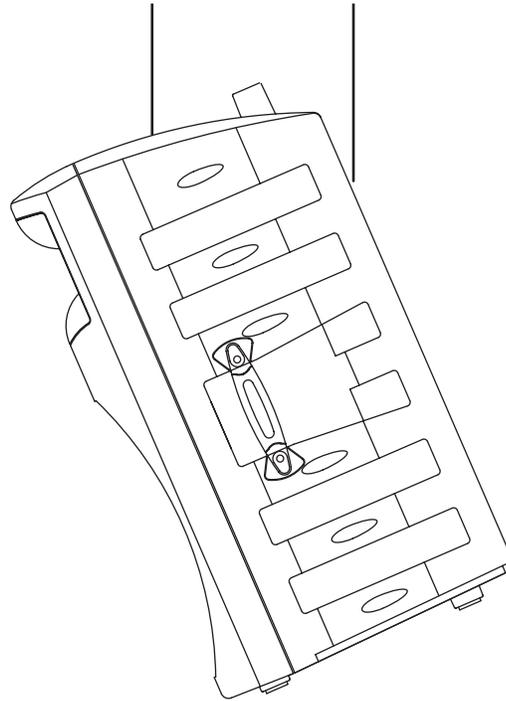


Controls and Functions

Setting Up Your dB500 System

Permanent Installation

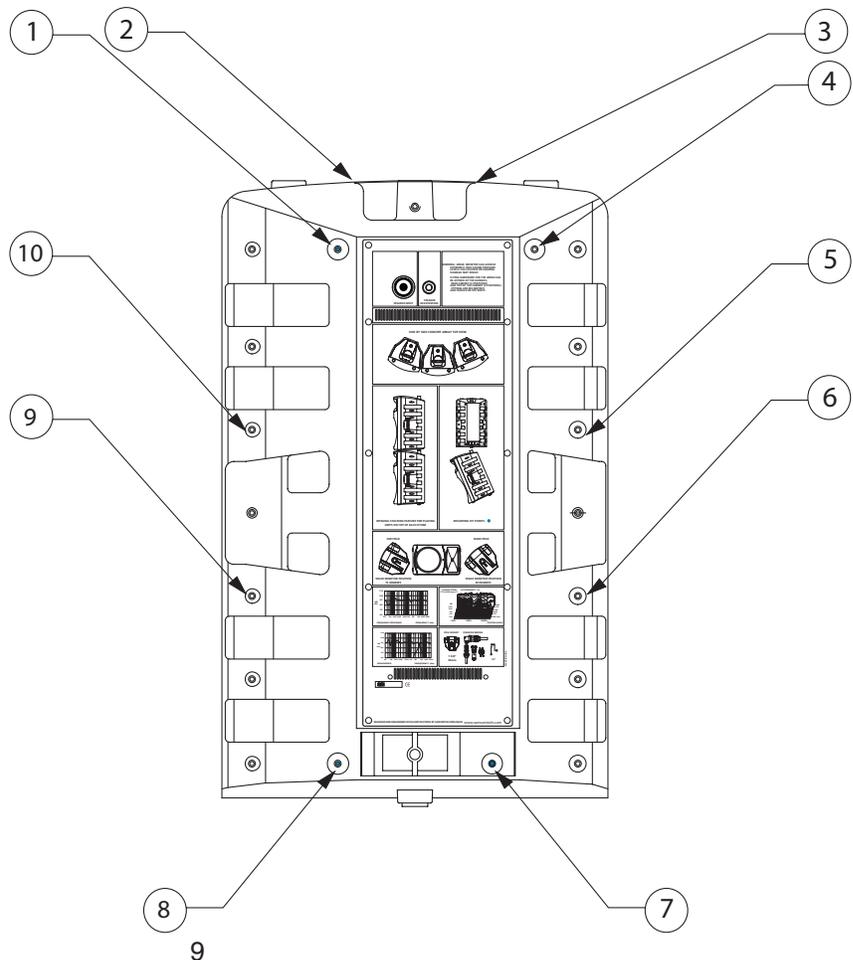
The dB500 is logical solution for many fixed installations in live sound venues, discos, schools, houses of worship, convention centers and airport terminals to name a few. The enclosure is extremely versatile for installation as it can be hung in several different positions by using the 10 Fly-points. Hanging the dB500 is serious business and therefore licensed and insured professional sound contractors only should perform such an installation.



Using the Fly-points

IMPORTANT NOTE: Only licensed and insured professional sound contractors should install the dB500 using the Fly-points. Samson assumes no liability for any installation.

The dB500 features ten Fly-points located in pairs below each of the five carry handles. By removing the handles you will have access to the threaded inserts that are compatible with a variety of standard M8 hardware including that offered by ATM Flyware.

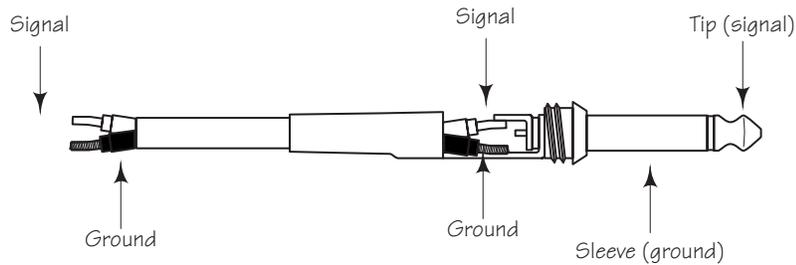


dB500 Wiring Guide

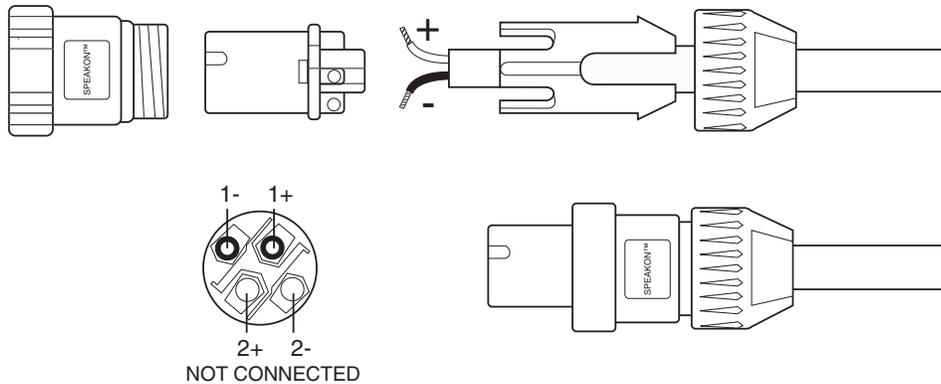
CONNECTING THE dB500

The dB500 provides both Speakon and 1/4" phone connectors for easy interface with industry standard cables. You can use a variety of standard speaker cables that are available "off the shelf" at you local pro-audio or musical instrument retailer. Be sure that cables use standard stranded speaker wire, and a gauge 12-14 is recommended. If you are making you own cables, use the diagrams following below to ensure a proper hook up.

Unbalanced 1/4" Connector

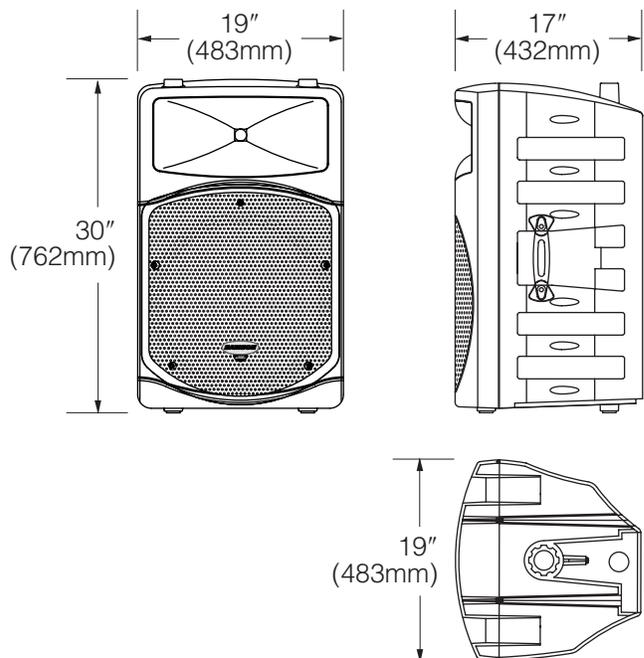


Speakon Wiring Guide



dB500 Specifications

| | |
|------------------------------|---|
| Power Rating: (@ 8Ω): | 500 Watts Program |
| Frequency Response: | 60 Hz – 15 kHz ± 3 dB |
| Operating Impedance: | 8 Ohms |
| Sensitivity: | 97 dB SPL @ 1W/1m |
| Crossover Frequency: | 2.3 kHz (24 dB Per Octave) |
| LF Driver: | 15" heavy-duty driver 2.5" voice coil (Kapton Former) 50 oz. barium ferrite magnet |
| HF Driver: | 1.75" titanium compression driver |
| Mounting: | Integral 1 3/8" Pole Mount Receptacle 15° wedge monitor position, 30° wedge monitor position, Ten Fly Points |
| Weight: | 50 lbs. 22.7kg |
| Dimensions: | 30" (h) x 19" (w) x 17" (d) (762mm) (h) x (483mm) (w) x (432mm) (d) |



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