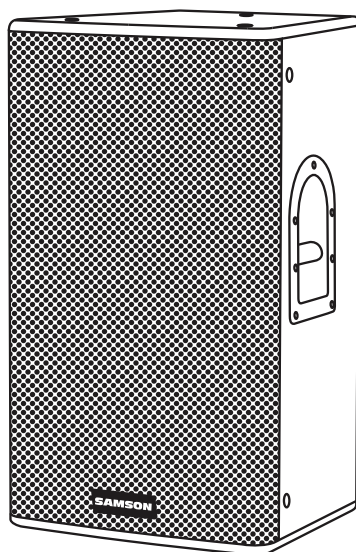
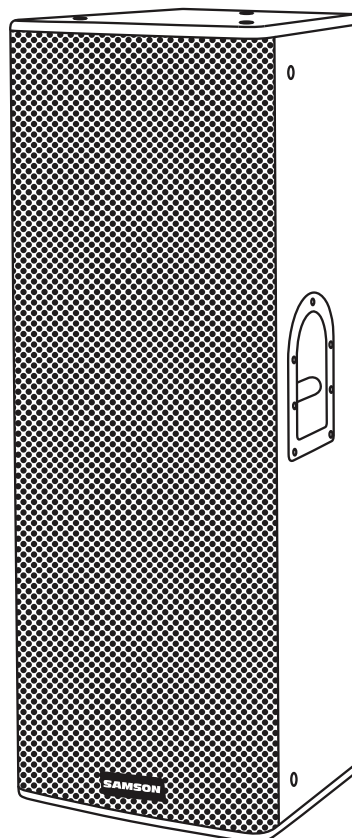


RSX PASSIVE LOUDSPEAKERS



RSX115



RSX215

OWNER'S MANUAL

SAMSON[®]

Safety Instructions



WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. 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. The lightning flash with an arrow-head 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

Thank you for purchasing the Samson RSX series passive loudspeaker system. The RSX series are high performance, two-way passive loudspeakers designed for portable, front of house and fixed installation sound reinforcement applications.

Perfect for large PA systems, the RSX215 features two, heavy-duty 15" (380 mm) low frequency drivers with 3" (76 mm) voice coils, with power handling of 1200 watts AES, and 4800 watts peak. The RSX 115 has a single heavy-duty 15" (380 mm) low frequency drivers with 3" (76 mm) voice coils, with power handling of 600 watts AES, and 2400 watts peak. Detailed high frequency reproduction is produced by a Celestion 1.75" (44 mm) PEPT compression driver, mounted in a 60° x 90° horn. The result is brilliant, crystal-clear audio with precision control of the sound field.

Audio connections are managed with 2-pole, locking Speakon® or ¼" phone connectors. The speakers include parallel input and extension jacks for expanding the system.

The enclosure is constructed from 9-layer plywood, finished with a durable black textured paint, and black powder-coated perforated steel grille backed with black cloth, ensuring for maximum protection against wear and tear. The loudspeaker is furnished with twelve M10x30 fly-points for applications that require permanent installation.

As fixed sound reinforcement or as a durable, great-sounding road PA, the RSX loudspeaker is ideal for sound professionals and performers looking for serious output and precision sound quality from a PA speaker system.

In these pages, you'll find a detailed description of the features of the RSX loudspeaker system, instructions for its setup and use, and full specifications. If your loudspeaker was purchased in the United States, you'll also find a warranty card enclosed—don't forget to fill it out and mail it in so that you can receive online technical support and so that we can send you updated information about this and other Samson products in the future. Also, be sure to check out our website (www.samsontech.com) for complete information about our full product line.

We recommend you keep the following records for reference, as well as a copy of your sales receipt.

Serial number: _____

Date of purchase: _____

Dealer name: _____

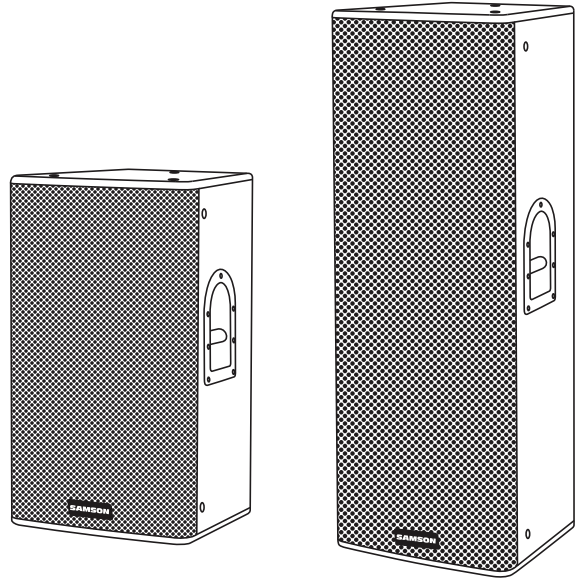
With proper care and maintenance, your RSX loudspeaker will operate trouble-free for many years. Should your loudspeaker ever require servicing, a Return Authorization (RA) number must be obtained before shipping the loudspeaker to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for an RA number prior to shipping your unit. Please retain the original packing materials and, if possible, return the unit in its original carton. If your RSX series loudspeaker was purchased outside of the United States, contact your local distributor for warranty details and service information.

Key Features

The RSX series two-way loudspeaker systems are perfectly suited for portable and permanent sound reinforcement applications. Here are some of their main features:

RSX115

- Two-way passive loudspeaker system
- High power handling: 600 watts AES / 2400 watts peak
- 15" (380 mm) low-frequency driver with 3" (76 mm) voice coil for extended low frequency response
- Celestion CDX1-1745 1.75" (44 mm) PEPT high performance compression driver
- 60° x 90° horn with 1" exit for a controlled, consistent sound
- 2 x Speakon® & ¼" phone parallel speaker jacks
- Standard speaker stand pole socket for tripod mounting
- Twelve M10 (10 mm) fly points
- Trapezoidal, plywood construction, with durable black textured paint finish



RSX215

- Two-way passive loudspeaker system
- High power handling: 1200 watts AES / 4800 watts peak
- Dual 15" (380 mm) low-frequency drivers with 3" (76 mm) voice coils for extended low frequency response
- Celestion CDX1-1747 1.75" (44 mm) PEPT high performance compression driver
- 60° x 90° horn with 1" exit for a controlled, consistent sound
- 2 x Speakon® & ¼" phone parallel speaker jacks
- Twelve M10 (10 mm) fly points
- Trapezoidal, plywood construction, with durable black textured paint finish

Input Connections

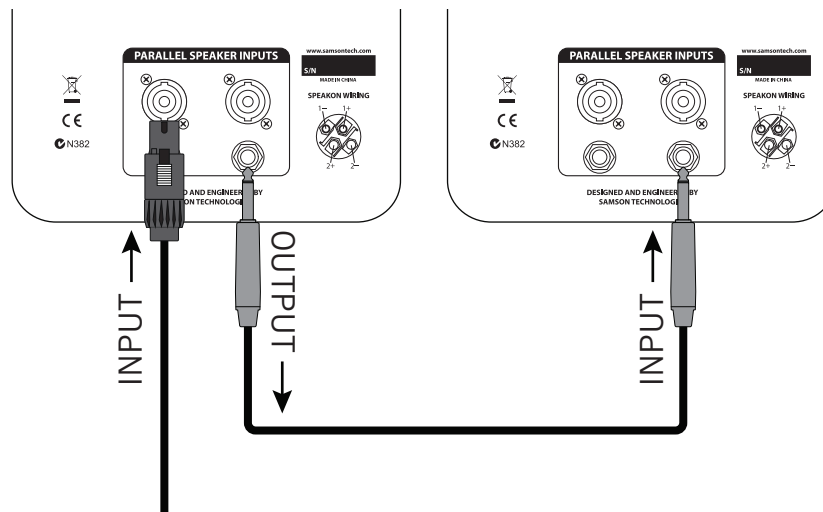
The RSX has a pair ¼" (TS) phone and Speakon® connectors wired in parallel. This enables you to directly connect an extension cabinet to an RSX speaker.

Only use one ¼" or Speakon® connector as an input connector from an amplifier. Typically, you will only connect a single extension cabinet to an RSX cabinet, but it is possible to daisy-chain multiple cabinets. When wiring multiple cabinets in parallel, attention must be paid to the overall impedance of the loudspeaker system, and the minimum load impedance of the amplifier. Please see the chart below for typical impedance calculation for multiple speaker arrangements.

Typical Impedance Calculations

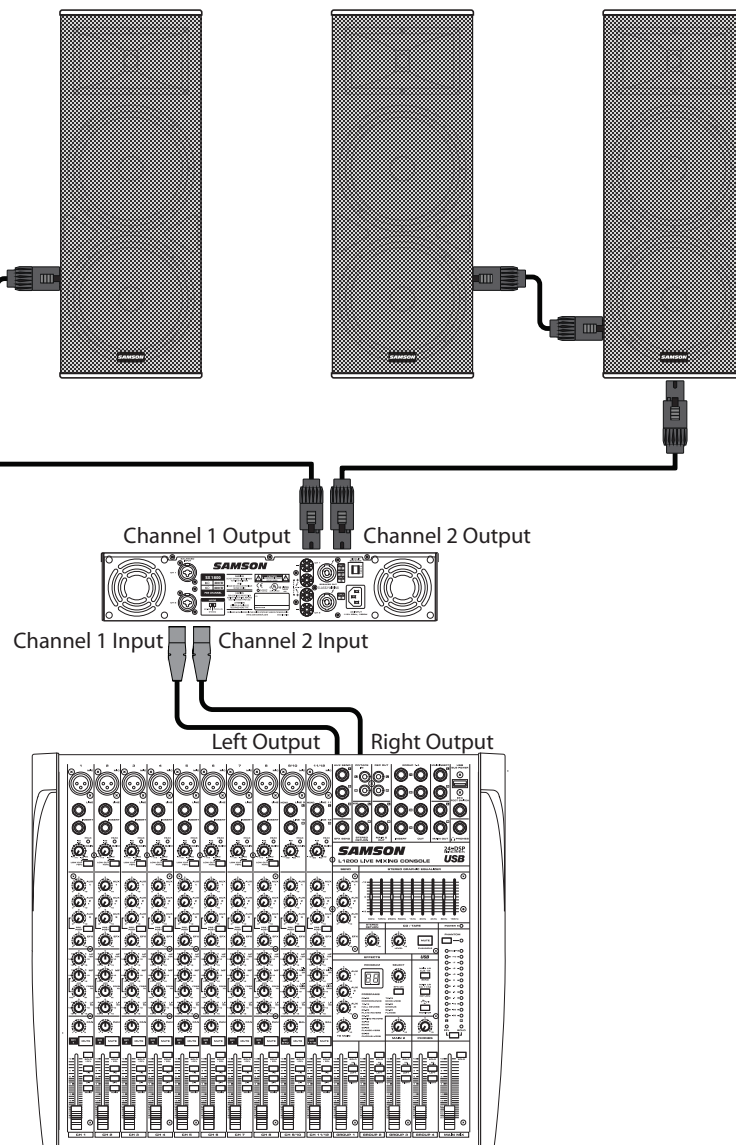
$$\begin{aligned}16\Omega + 16\Omega &= 8\Omega \\8\Omega + 16\Omega &= 5.3\Omega \\8\Omega + 8\Omega &= 4\Omega \\8\Omega + 16\Omega + 16\Omega &= 4\Omega \\16\Omega + 16\Omega + 16\Omega + 16\Omega &= 4\Omega \\4\Omega + 8\Omega &= 2.7\Omega \\4\Omega + 4\Omega &= 2\Omega\end{aligned}$$

It is recommended, especially for installation applications, to use Speakon® style connectors because they lock into jacks providing a secure connection, are able to handle high current, and the contacts do not cause a momentary short when connecting to an amplifier or speaker cabinet.



Basic Set Up

The RSX loudspeakers are passive cabinets, which means that they need to be connected to a power amplifier to reproduce an audio signal. Each speaker cabinet features two sets of parallel connectors. This enables each cabinet to be daisy chained to an additional loudspeaker. When connecting multiple speaker to a power amplifier or powered mixer, you must pay attention to the minimum load impedance of the amplifier. Most amplifiers can safely provide power to loudspeakers with a minimum load impedance of 8 or 4 ohms. The RSX loudspeakers are rated at 8 ohms. This means if two RSX cabinets are wired in parallel the nominal impedance of the speaker system will be 4 ohms.



When speakers are connected in parallel, the impedance is reduced. The formula to calculate the total impedance of your speaker system is:

$$1/R_t = 1/R_1 + 1/R_2 + 1/R_3 + \dots 1/R_n$$

Where “R” is the impedance of a speaker cabinet.

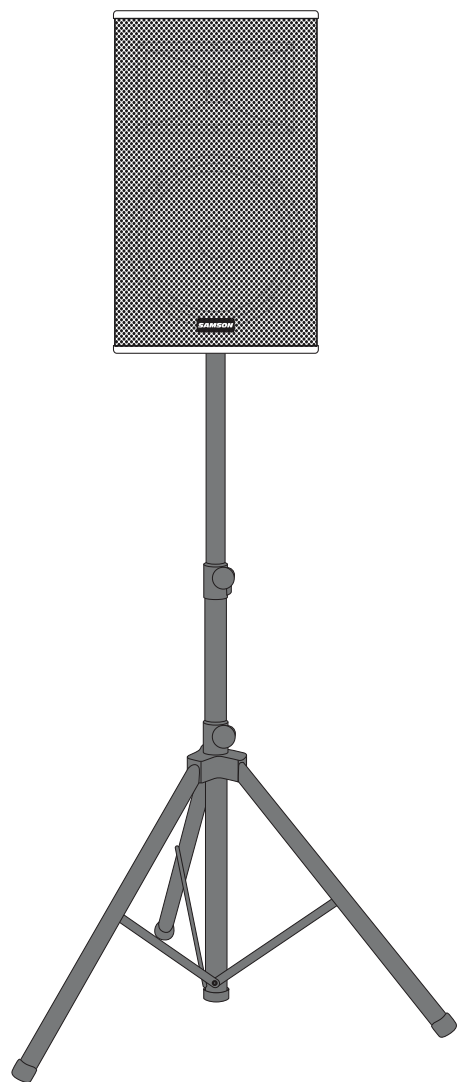
If all speakers have the same impedance, the total impedance will be equal to the impedance of a single speaker divided by the total number of speakers. For example, if you have two 4 Ohm speakers connected in parallel, the total impedance is 4 divided by 2, or 2 Ohms. You must be careful when connecting speakers in parallel to an amplifier. The impedance can quickly fall below safe levels. This is especially true when connecting speakers in parallel to a bridged amplifier.

Using Speaker Stands - RSX115

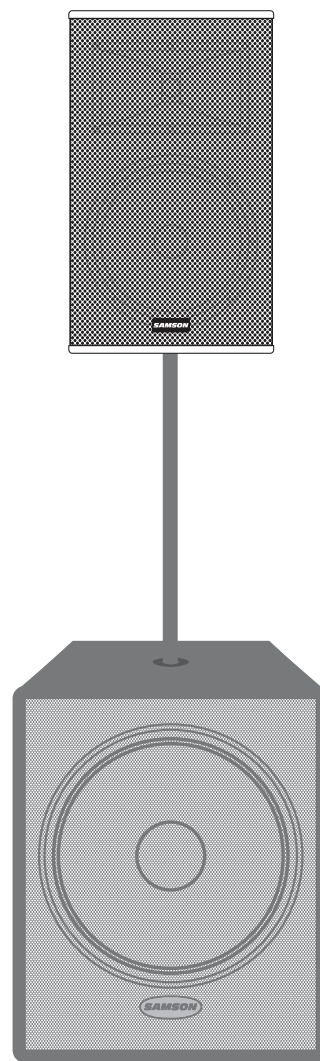
The RSX115 features a standard $1\frac{3}{8}$ " pole mount receptacle, which enables the speaker to be mounted on a standard tripod stand or subwoofer satellite pole. For best results raise the speakers above the heads of the listening audience.

When mounting a speaker onto any stand, always ensure that the stand is on a flat, level surface, with the legs fully extended. Be sure to check that the maximum load weight for the stands is greater than the weight of the RSX115. Never use a stand with a maximum load weight lower than the RSX115. Do not attempt to mount more than one speaker on a stand at one time. The RSX loudspeakers are heavy, unless you feel confident that you can handle lifting the weight of the cabinet, you should ask for a second person to help place the cabinet on a stand.

When the speaker is placed on the stand, always check the integrity and center of gravity of the system. If the speaker can be tipped easily, or the pole is swaying, it is recommended to lower the height of the stand. Position the stand and route cables so that the performers and the audience can not tip over or trip on the system.



RSX115 mounted on a tripod stand



RSX115 mounted on a subwoofer
satellite pole

Permanent Installation

The RSX series loudspeakers are a perfect solution for many fixed installations such as live sound venues, discos, schools, houses of worship, convention centers and airport terminals. The enclosure is extremely versatile for installation as it can be suspended in several different positions by using the twelve fly points.

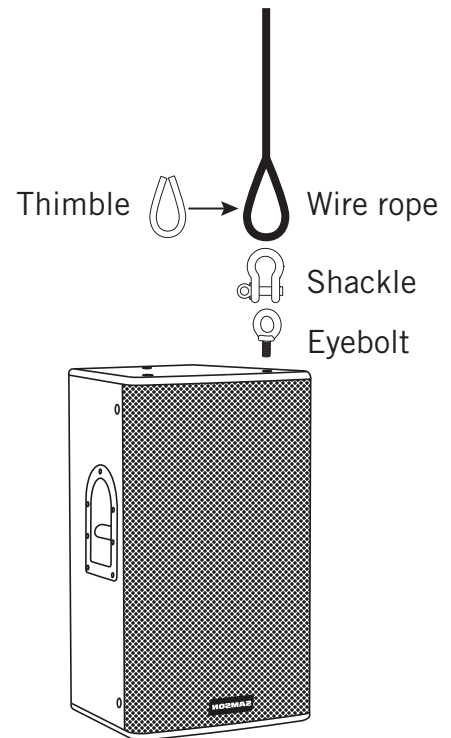
IMPORTANT NOTE: Suspending an RSX loudspeaker should only be done by a qualified, licensed and insured professional sound contractor. Installation in an unsafe manner or location can result in property damage and serious injury. When installing the speaker, make sure all local ordinances are understood and adhered to. Always check and ensure that whatever structure the speaker is mounted to is void of cracks, deformations, or any signs of fatigue.

The RSX speakers are designed to be mounted directly to a structure. Never suspend an RSX cabinet from another speaker, nor suspend another speaker on an RSX cabinet.

When suspended, always affix a safety cable from the RSX cabinet to the mounting structure.

A minimum of two (2) attachment points must be used when suspending the speaker enclosure. The rear and side attachment points are only used as pull-back points to adjust the angle of the speaker. Only the top and bottom fly points are load bearing suspension points.

When suspending the RSX cabinet, it is recommended to use an eyebolt, thimble, and shackle along with wire rope.



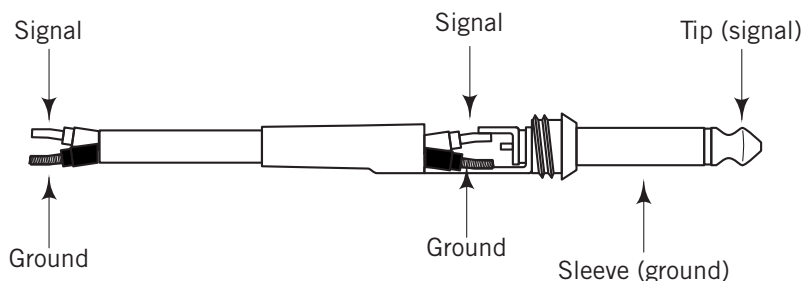
Cable Wiring

The RSX series speaker connections are made via the rear panel 1/4-inch and/or Speakon® connectors for easy interface with industry standard cables. Standard, unshielded speaker wire, available at your local pro audio or music store, with either 1/4-inch phone or Speakon® connectors and wire gauge of 12-14 awg is recommended.

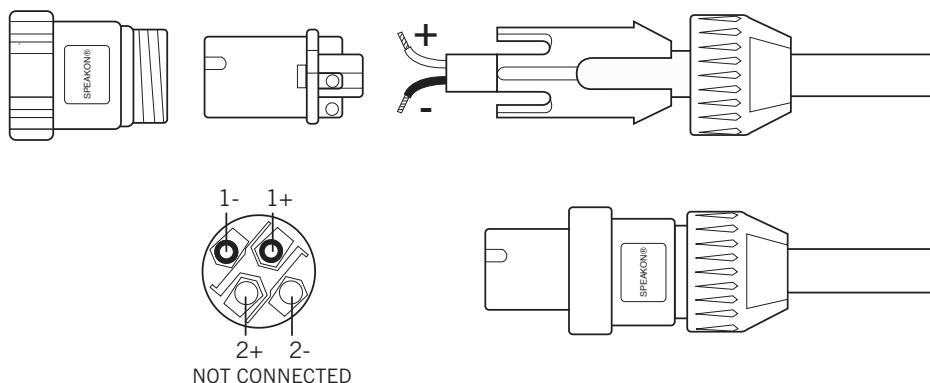
If your amplifier uses binding posts you can use speaker cables with banana connectors, but be sure to pay attention to the plus and minus polarity when making the connections. Make sure that the + terminal of the speaker, or banana connector, is connected to the + terminal of the power amplifier and that the - terminal of the speaker, or banana connector, is connected to the - terminal of the power amplifier. It is important that your PA system is connected in-phase otherwise you will not have the proper low-end response and stereo image.

Use the following diagrams below to ensure a proper connections when wiring your system:

Unbalanced 1/4" Connector



Speakon® Wiring Guide



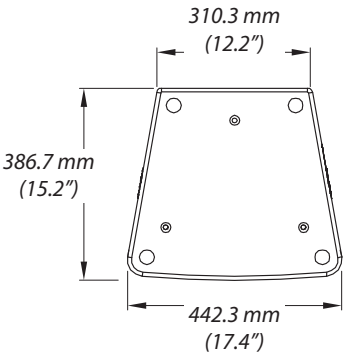
Technical Specifications:

Model	RSX115	RSX215
Power Rating	600 watts AES	1200 watts AES
	2400 watts peak	4800 watts peak
Nominal Impedance	8 ohms	8 ohms
Frequency Response	50 Hz to 20 kHz ± 3 dB	40 Hz to 20 kHz ± 3 dB
Sensitivity (1w @ 1m)	98 dB	98 dB
Maximum SPL	127 dB SPL	132 dB SPL
LF Driver	1 x 15" mm (380 mm) woofer with 3" mm (76 mm) voice-coil	2 x 15" (380 mm) woofer with 3" (76 mm) voice-coil
HF Driver	1 x Celestion CDX1-1745 1.75" (44 mm) voice-coil compression driver	1 x Celestion CDX1-1747 1.75" (44 mm) voice-coil compression driver
HF Protection	Internal overload Lamp	Internal overload lamp
Directivity	60° x 90°	60° x 90°
Enclosure	Trapezoidal, 15 mm, 9 layer plywood cabinet	Trapezoidal, 15 mm, 9 layer plywood cabinet
Finish	Black, Textured Paint	Black, Textured Paint
Suspension	12 x fly-points, M10	12 x fly-points, M10
Transportation	2 x Integrated carry handles	2 x Integrated carry handles
Grille	Black, Powder Coated, perforated steel with black cloth backing	Black, Powder Coated, perforated steel with black cloth backing
Connectors	2 x Speakon® NL2, 2 x ¼"	2 x Speakon® NL2, 2 x ¼"
Dimensions (H x W x D)	28.3" x 17" x 15.3" (720 mm x 431 mm x 387 mm)	44" x 17" x 15.3" (1120 mm x 430 mm x 387 mm)
Net Weight	56.2 lb (25.5 kg)	87.34 lb (39.7 kg)
Shipping Weight	63.5 lb (28.8 kg)	96.58 lb (43.9 kg)

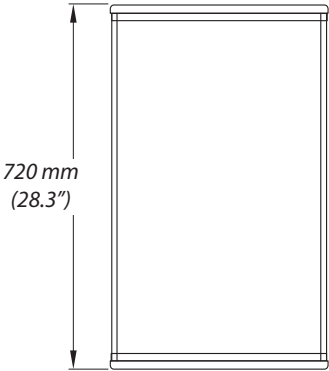
At Samson, we are continually improving our products, therefore specifications and images are subject to change without notice.

Dimensions

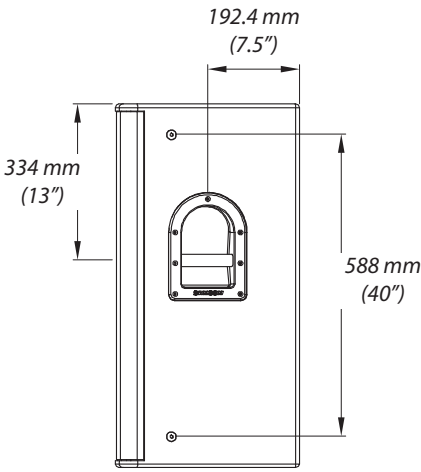
RSX115



Top View

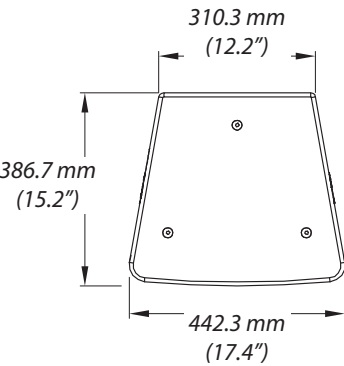


Front View

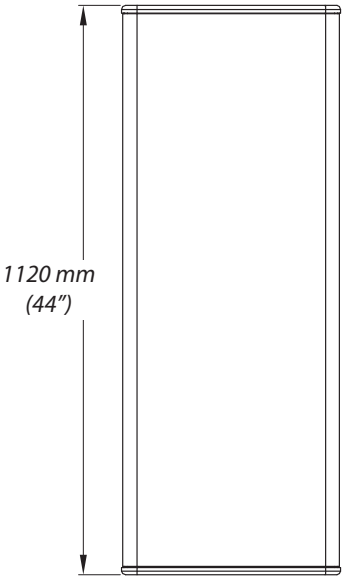


Side View

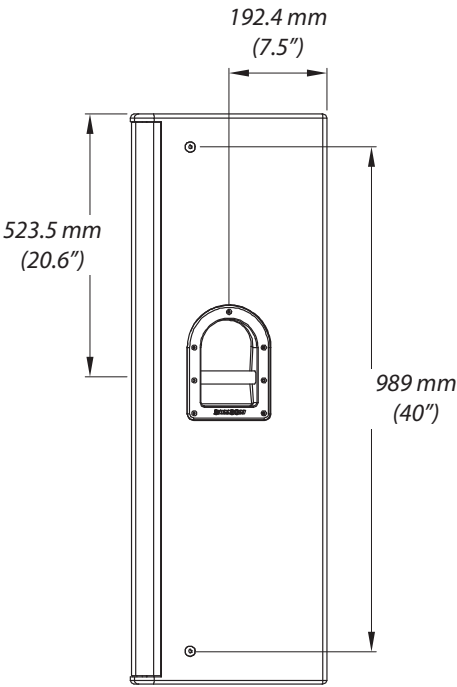
RSX215



Top View



Front View



Side View

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