



Boston
SPG555



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Introduction

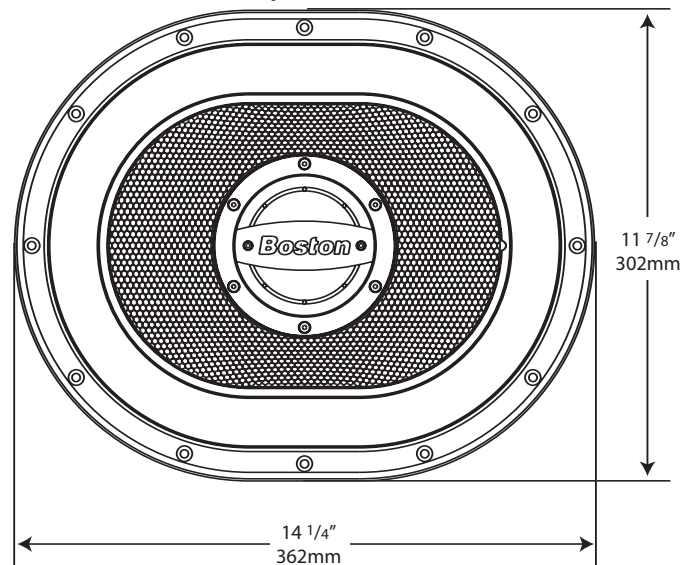
Thank you for purchasing the Boston Acoustics SPG555. Designed from the ground up at our engineering and production facility in Peabody, Massachusetts, the SPG555 utilizes many innovations and industry firsts. The SPG555 features our patented-pending 3.5-inch RVC™ (Removable Voice Coil) allowing you to either change the impedance of the subwoofer or repair a defective voice coil; without having to remove the SPG555 from its enclosure! By removing six screws, you can simply slide out the RVC™ and replace it with a new one. In addition, the SPG555 features our SPS™ (Soft Part System) allowing the user to replace the entire cone/surround/spider assembly should they ever become damaged.

The SPG555 incorporates a unique cone profile. The race track design allows the SPG555 to fit where other woofers cannot, giving you the ability to install the SPG555 in an area that would normally would limit you to using a 10-inch subwoofer. The area of the cone, 555cm², is larger than a standard 12-inch subwoofer—simply put, greater cone area for greater output. A 3.5-inch diameter voice coil combined with Boston Acoustics' patented RadialVent® cooling allow the SPG555 to handle an amazing 1000 watts RMS. Generally, conventional high output subwoofers rely on massive magnets that dramatically increase their weight. The SPG555 uses a powerful neodymium motor structure that is significantly lighter than ferrite motor structures, keeping the total weight of the SPG555 to only 26 lbs. Like the highly acclaimed Boston Acoustics G5 line of subwoofers, the SPG555 can be completely disassembled to allow customization. You can paint, powder-coat, or chrome the SPG555's basket and heatsink to customize the appearance of the SPG555 for a custom installation.

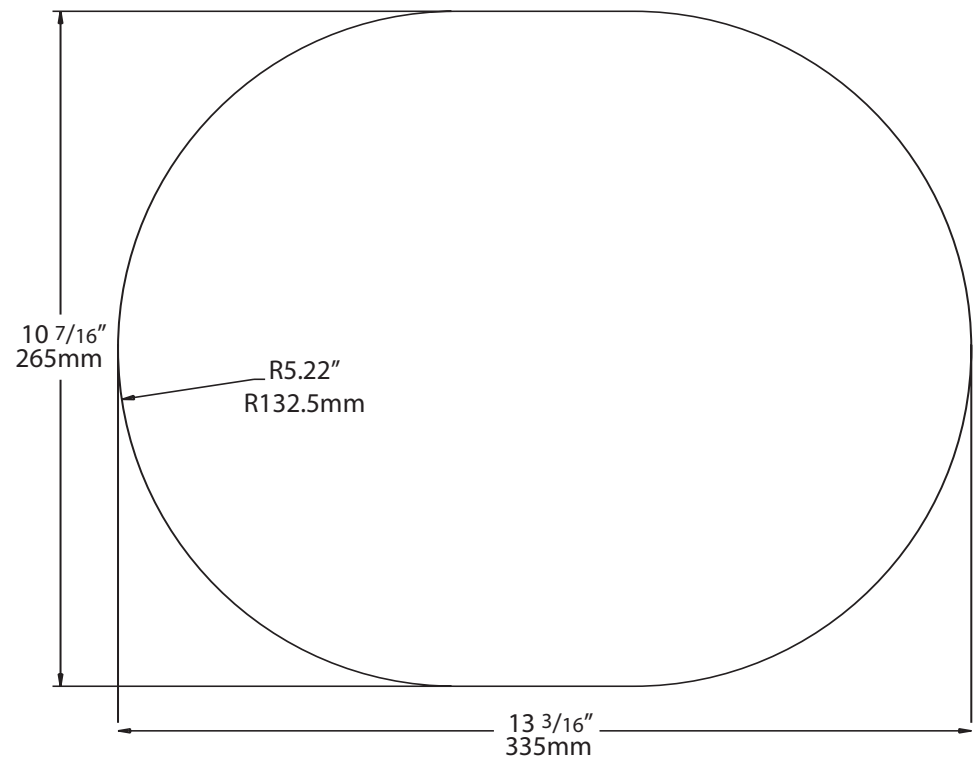
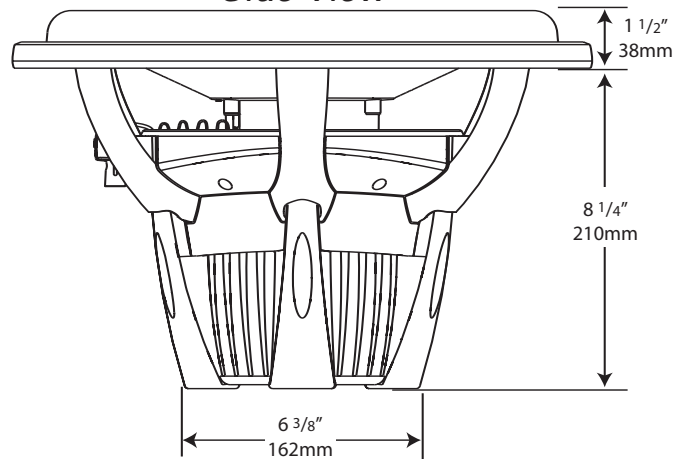
Take a few minutes and familiarize yourself with the contents of this manual. In addition to basic set-up requirements for the SPG555, you will also find several enclosure designs that allow you to tailor the performance of it to your specific design goals. Whether you are looking to build a vehicle for accurate reproduction or the production of mind-blowing bass, the SPG555 is up to the task. Attributes of each enclosure are highlighted on each design page and all three designs should be considered before making a decision on which one to build as the enclosure design will radically effect the end result. Regardless of enclosure chosen, the SPG555 truly defines reference level performance.

Dimensions

Top View



Side View



Cut-out



Specifications

General Specifications

| Model: | SPG555-4 | SPG555-2 |
|--|--------------------|--------------------|
| Nominal SD: | 555cm ² | 555cm ² |
| RMS Power Handling: | 1000w | 1000w |
| Impedance: | 4 Ω | 2 Ω |
| Frequency Response (± 3 dB in car): | 20-350Hz | 20-350Hz |
| Weight: | 26 Lbs. | 26 Lbs. |

SPG555 Thiele-Small Parameters

| Model: | SPG555-4 | SPG555-2 |
|------------------------|-----------------|-----------------|
| Fs (Hz): | 31.90 | 29.68 |
| Re (Ohms): | 3.15 | 1.68 |
| Qms: | 11.66 | 11.70 |
| Qes: | 0.86 | 0.67 |
| Qts: | 0.80 | 0.63 |
| Vas (Liters): | 39.77 | 44.40 |
| Mms (Grams): | 276.7 | 286.20 |
| Cms (μ M/Newton): | 89.9 | 99.9 |
| Xmax (Mm): | 22 | 22 |
| Xmech (Mm): | 49 | 49 |
| Sd (CM ²): | 555 | 555 |
| Bl (Tesla-M): | 14.27 | 11.58 |
| SPL Eff (dB @ 1w/1m): | 83.6 | 84.2 |
| SPL Sen (dB @ 2.83v): | 87.7 | 91.0 |

Sealed Enclosure

Sealed Enclosure Explanation

A sealed enclosure is the best option if sound quality is of primary concern. It will offer the best overall response across the low frequency audio spectrum, great transient response, and will allow for the most seamless integration between the subwoofer system and front speakers. It is also half the size of the sound quality ported design minimizing the space that needs to be dedicated to the subwoofer enclosure.

Sealed Enclosure Specifications

Recommended Enclosure Volume*: 1.0 ft³ (28.3L)
 Q-Tune™† (Highpass and Q Setting): 25Hz @ 0.707

Sealed Enclosure Example

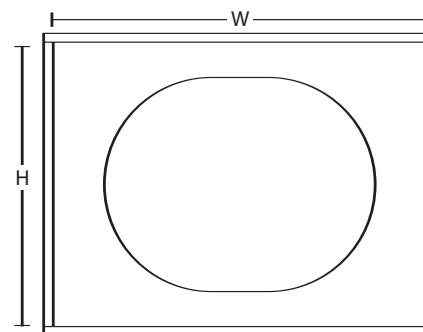
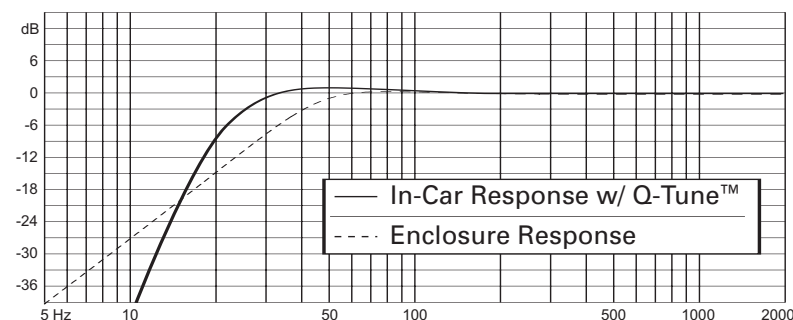
Gross Volume: 1.0 ft³ (28.3L)
 Internal Height (H): 10 ½" (26.7cm)
 Internal Width (W): 13" (33.0cm)
 Internal Depth (D): 13" (33.0cm)
 Recommended Fill: 1 Lbs. of Polyfil

*All enclosure dimensions are internal and include basket displacement

The above enclosure shape is an example and these dimensions can be modified provided that the exact internal volume is retained

¾-inch thick M.D.F. is recommended as a minimum

†Q-Tune™ is a feature found on Boston GT Amplifiers



Front View



Top View



Sound Quality Ported Enclosure

Sound Quality Ported Enclosure Explanation

The use of low tuning allows the SPG555 to deliver much stronger low bass energy when compared to the sealed enclosure. Use of a smaller volume combined with low tuning allows the ported sound quality enclosure to produce a relatively flat response down to 30Hz while delivering solid impact at high output levels.

Sound Quality Ported Enclosure Specifications

| | |
|------------------------------------|-----------------------------|
| Recommended Enclosure Volume*: | 2.1 ft ³ (59.4L) |
| Tuning Frequency: | 33Hz |
| Q-Tune™† (Highpass and Q Setting): | 31Hz @ 0.9 |

Sound Quality Ported Enclosure Example

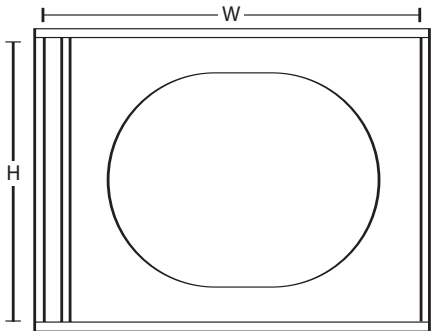
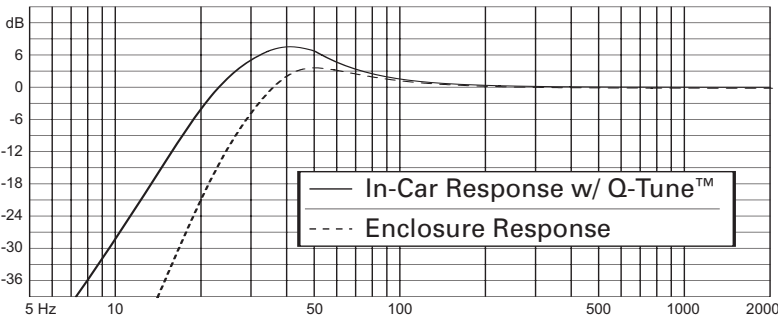
| | |
|----------------------|-----------------------------|
| Gross Volume: | 2.1 ft ³ (59.4L) |
| Internal Height (H): | 14" (35.6cm) |
| Internal Width (W): | 18" (45.7cm) |
| Internal Depth (D): | 14" (35.6cm) |
| Slot Port Opening: | 1 ¼ x 14" (3.2 x 35.6cm) |
| Port Length: | 22" (55.9cm) |

Note: If a rectangle port cannot be used, two 3" (77mm) round ports, 16" (406mm) long may be substituted.

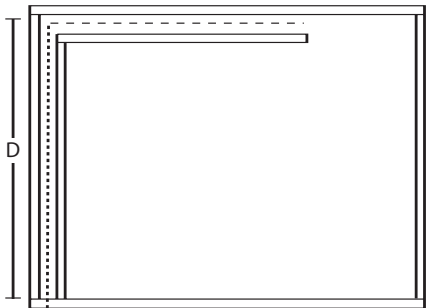
*All enclosure dimensions are internal and include basket and port displacement
The above enclosure shape is an example and these dimensions can be modified provided that the exact internal volume is retained

¾-inch thick M.D.F. is recommended as a minimum

†Q-Tune™ is a feature found on Boston GT Amplifiers



Front View



Top View

High Output Ported Enclosure

High Output Ported Enclosure Explanation

As the name suggests, the high output ported enclosure will play the loudest of the three designs. Its large internal volume combined with large port area delivers great efficiency for very high output. Tuning is higher than the Sound quality enclosure bringing the peak efficiency point of the enclosure much closer to average vehicle resonance but is still tuned low enough for good musical reproduction.

High Output Ported Enclosure Specifications

Recommended Enclosure Volume*: 2.5 ft³ (70.8L)
 Tuning Frequency: 38Hz
 Q-Tune™†: (Highpass and Q Setting) 36Hz @ 1.2

High Output Ported Enclosure Example

Gross Volume: 2.5 ft³ (70.8L)
 Internal Height (H): 14" (35.6cm)
 Internal Width (W): 22" (55.9cm)
 Internal Depth (D): 14" (36.8cm)
 Slot Port Opening (PW): 1 3/4 x 14" (4.5 x 35.5cm)
 Port Length (PL): 19" (48.3cm)

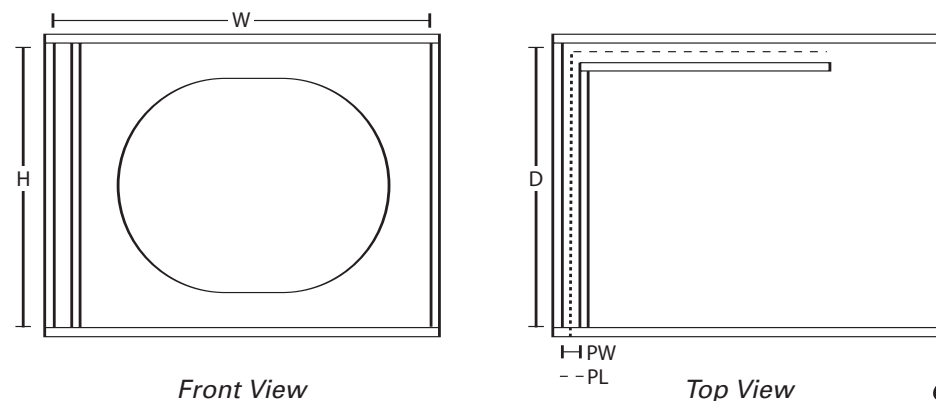
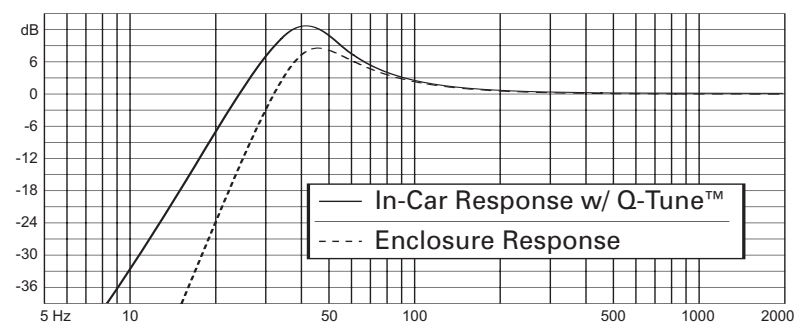
Note: If a rectangle port cannot be used, two 3" (77mm) round ports, 10" (254mm) long may be substituted.

*All enclosure dimensions are internal and include basket and port displacement

The above enclosure shape is an example and these dimensions can be modified provided that the exact internal volume is retained

3/4-inch thick M.D.F. is recommended as a minimum

†Q-Tune™ is a feature found on Boston GT Amplifiers





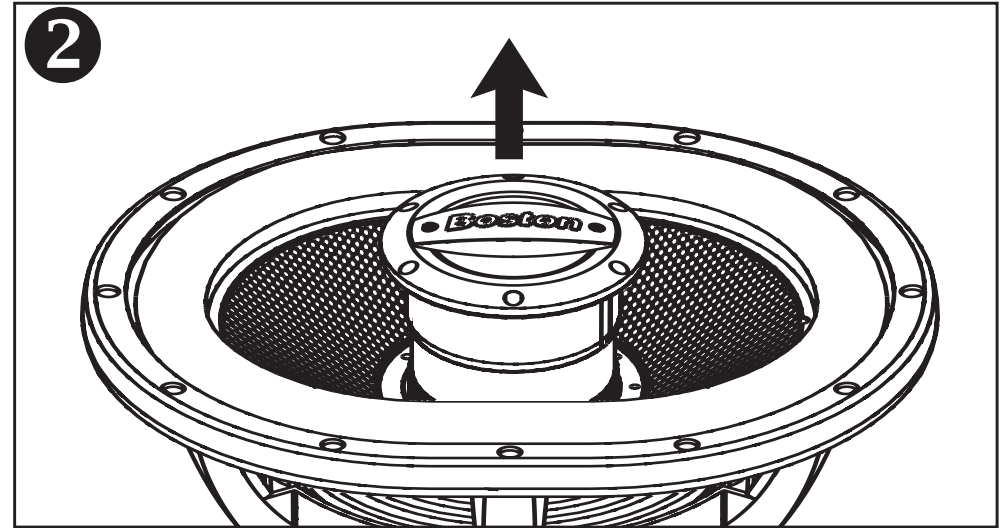
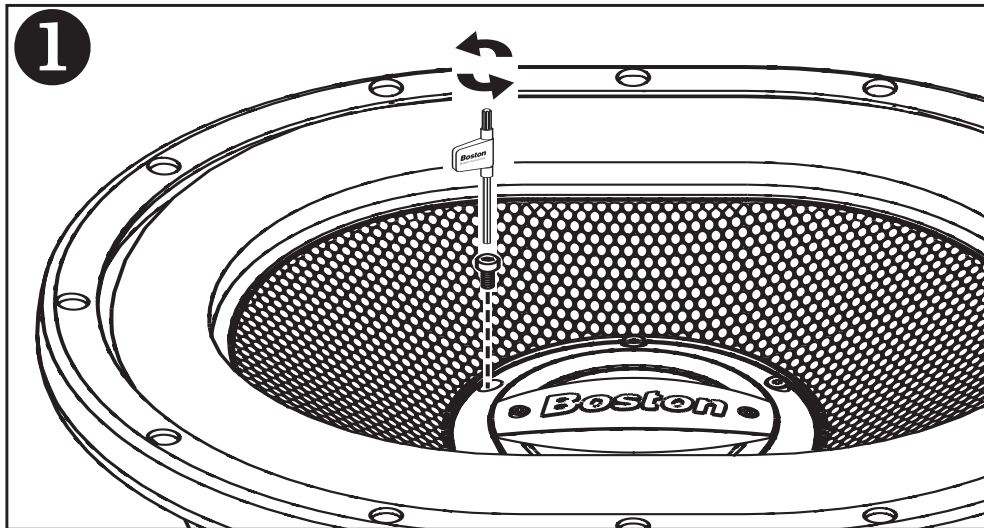
RVC™ (Removable Voice Coil)

Removable Voice Coil

The SPG555 is the first woofer ever that allows the voice coil to be exchanged without having to remove the woofer from the enclosure. This unique feature allows you to change the impedance of the woofer or repair a damaged voice coil, not just easily, but quickly.

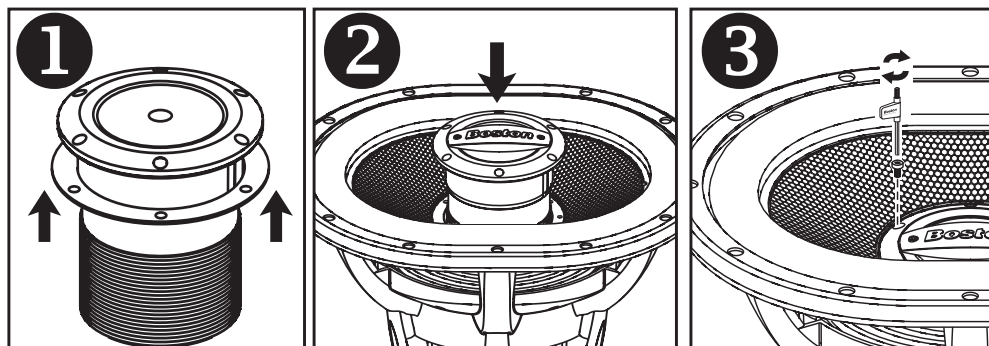
Removing The RVC™

- 1) The RVC™ is held in place with six screws. Using the provided tool (2.5mm allen hex), remove the six screws around the outside of the RVC™ ❶.
- 2) Once the screws are removed, pull up on the handle and the RVC™ will slide out ❷.



Installing The RVC™

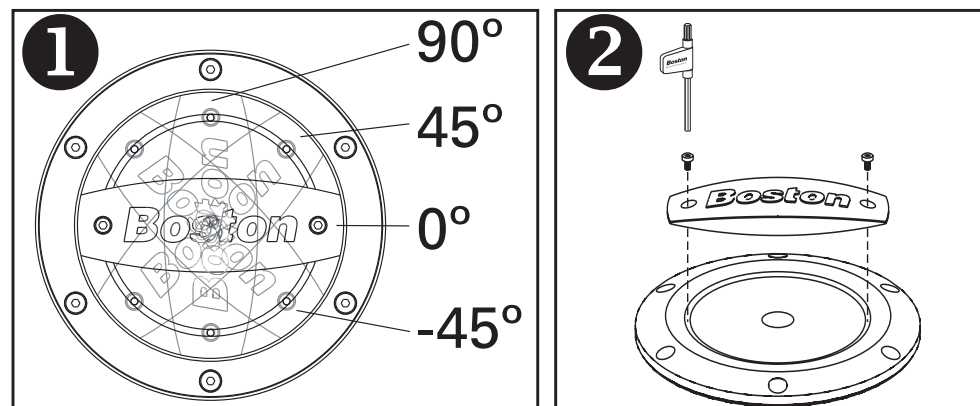
- 1) Install the new gasket (provided) on to the RVC™ ❶.
- 2) Align the notches on the RVC™ with the insets on the SPG555 cone ❷ (the RVC™ is keyed for proper orientation and will not seat flush or seal into the cone if the RVC™ is not properly positioned).
- 3) Once the RVC™ is seated to the cone, hand tighten the six screws ❸, do not over-tighten the screws.



Installing The Handle

- 1) The handle is held in place by two screws (included in the hardware kit). The handle can be positioned on one of eight different ways ❶.
- 2) Line up the handle with two of the six screw holes on the RVC™. Using the provided 2.5mm tool, hand tighten the screws ❷. The specific orientation of the handle will not effect performance, however, to ensure proper tuning, must be installed prior to using the SPG555.

Warning: Choose the position of the handle wisely. Installing the screws into the RVC™ will mar the area around where the screw is installed. Although not visible with the handle installed in the original position, if the handle is moved, you will be able to see the enlarged screw holes from the previous install position.





Interchangeable SPS™

The SPG555 features a removable SPS™ (Soft Part System) that contains the cone, surround, and spider built into one frame. In the event that the cone, surround, or spider becomes damaged, it is easily swapped out with a new one. Also, If the basket of the SPG555 is going to be visible, the SPS™ can be removed allowing for painting, plating, or powder coating of the chassis.

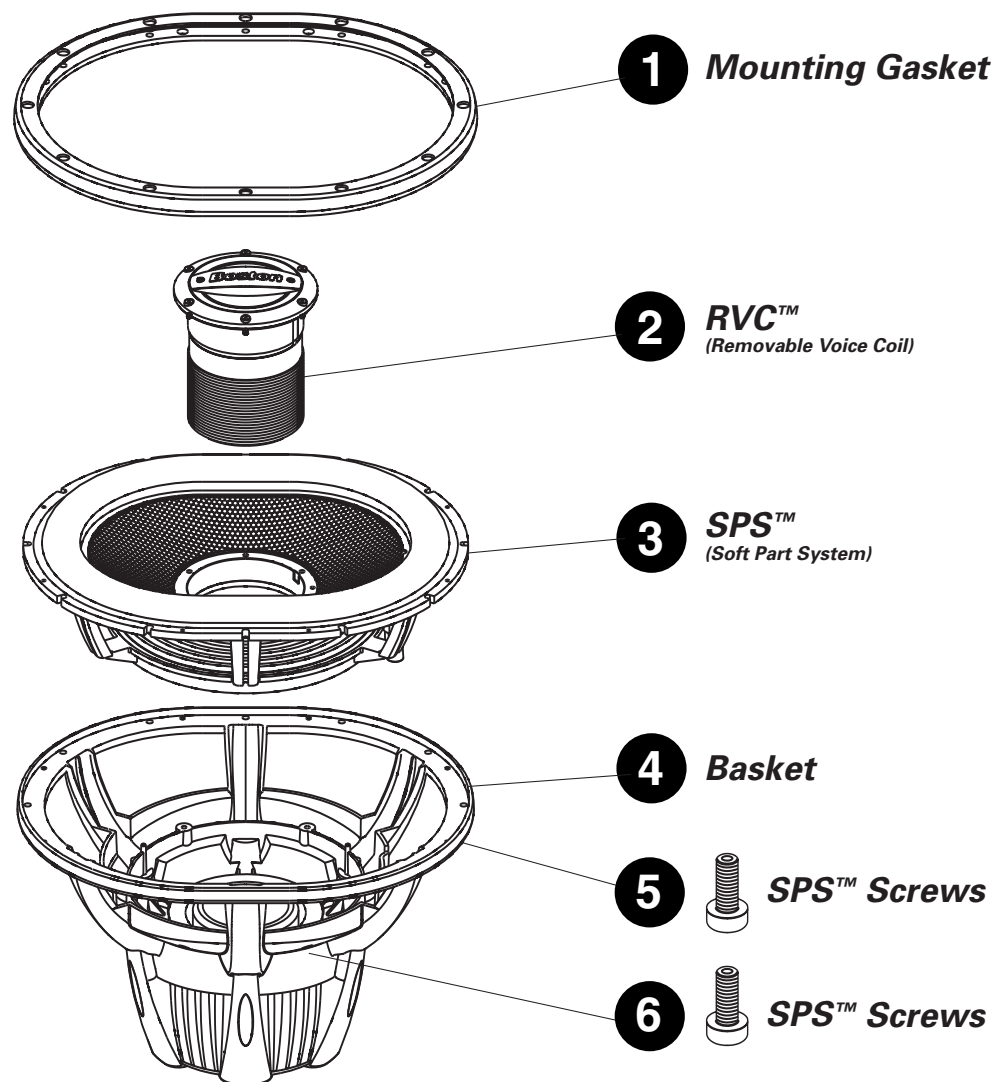
SPS™ Removal Instructions

- 1) Remove the SPG555 from the subwoofer enclosure.*
- 2) Remove the mounting gasket ❶ from the SPG555.*
- 3) Remove the RVC™ ❷ from the SPS™ ❸ (see previous page for removal instructions).*
- 4) Remove the 8 screws ❺ that secure the top of the SPS™ ❸ to the basket ❹.*
- 5) Remove the 6 screws ❻ that secure the bottom of the SPS™ ❸ to the basket ❹.*
- 6) With all 14 screws removed, the SPS™ will slide out.*

SPS™ Installation Instructions

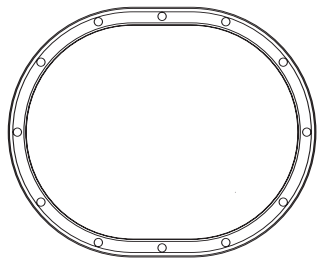
- 1) Place the SPS™ ❸ in the basket ❹ making sure that the terminals are positioned on the correct side, the SPS™ ❸ uses a peg to assure proper alignment and will not properly seat if installed backwards.*
- 2) Hand tighten the 8 screws ❺ that secure the top of the SPS™ ❸ to the basket ❹.*
- 3) Hand tighten the 6 screws ❻ that secure the bottom of the SPS™ ❸ to the basket ❹.*
- 4) Install the RVC™ ❷ into the SPS™ ❸ (see previous page for installation instructions).*
- 5) Install the mounting gasket ❶ on the SPG555.*
- 6) Install the SPG555 back into the subwoofer enclosure.*

SPG555 Exploded View

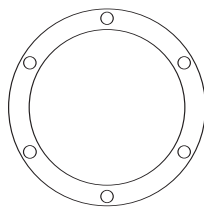




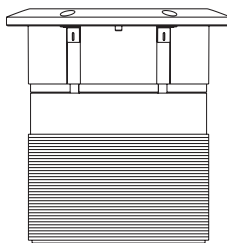
Subwoofer Parts



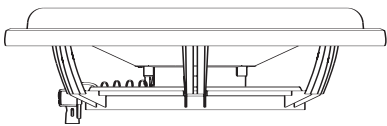
Mounting Gasket



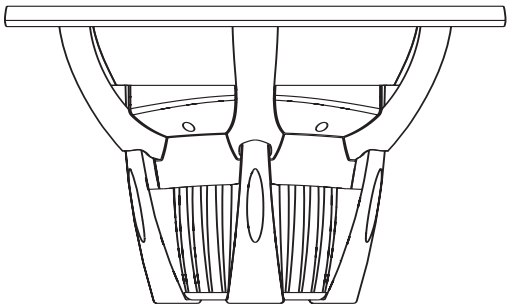
RVC™ Gasket



*RVC™
(Removable
Voice Coil)*



*SPS™
(Soft Part System)*



*SPG555 Basket, Motor
Structure, and Heat Sink*

Hardware



Mounting Screw
13 x 10



SPS™ Screw
x 14



RVC™ Screw
x 6



Contact Information

Contacting Boston

For questions regarding installation or service, please contact the dealer from whom you have purchased the product or contact us directly at:

***Boston Acoustics, Inc.
300 Jubilee Drive
Peabody, MA 01960***

*Phone #: 978-538-5000
Fax #: 978-538-5100
Email: support@bostona.com*

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