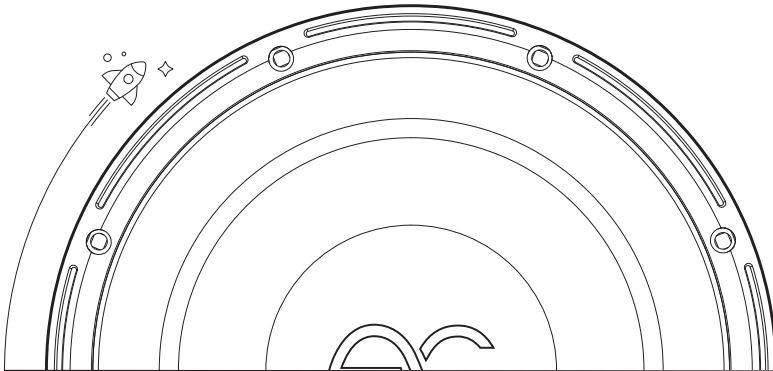


# **AudioControl®**

*Making Good Sound Great™*

## **Features**

- Maximum bass when there's little space
- Rugged, weather-resistant design
- Removable subwoofer grille
- Structurally rigid heavy duty voice coil
- Optimal thermal efficiency design
- Fiber matrix injection molded polypropylene cone
- Bass: The Final Frontier



## Space™ Series

LOW-PROFILE SUBWOOFER

SPC-10S2 | SPC-10S4 | SPC-12S2 | SPC-12S4

User Guide



## Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not submerge this apparatus in water.
6. Clean only with a dry cloth.
7. **WARNING:** The subwoofer enclosure must be properly secured in the vehicle. Improper installation may lead to permanent injury or death. Installation of the speaker enclosure must be done with great care by qualified personnel, to prevent damage to fuel lines, power and other electrical wiring, hydraulic brake lines, and other systems, that might compromise vehicle safety.
8. Use speaker wire of sufficient size to ensure adequate current to the speaker. For Space Series Subwoofers, this means 10-14 gauge speaker wire.
9. To prevent excessive cone excursion and potential damage to the subwoofer it is advisable to use an infrasonic (subsonic) filter set 1/2 octave below Fb. (Hz)
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power input terminals are damaged, objects have fallen into the apparatus, does not operate normally, or has been dropped.
11. Not tested for use in outer space.
12. Exposure to high sound pressure levels may lead to permanent hearing loss. Take every precaution to protect your hearing.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Recycling notice: If the time comes and this apparatus has fulfilled its destiny, do not throw it out into the trash. It has to be carefully recycled for the good of mankind, by a facility specially equipped for the safe recycling of electronic apparatus. Please contact your local or state recycling leaders for assistance in locating a suitable nearby recycling facility. Or, contact us and we might be able to repair it for you.



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# Enclosure Talk

Right on! You got yourself a shiny new AudioControl subwoofer, or maybe two. After you're done admiring the quality workmanship and attention to detail, you need to get 'er in a proper enclosure. Enclosure is just a fancy name for a speaker box. Below are some tips you should consider before buying or building an enclosure. If you're not into math, or have trouble plugging in power tools, your best bet is to seek out a qualified AudioControl dealer. They have the skills, experience and specialized tools to get the bass bumpin' and they usually smell alright, too.

## Sealed vs. Ported Enclosure

Aaahh... the age old question: Which is better, a sealed or ported enclosure? The answer usually boils down to a few things; available space in the vehicle, music listening preference and the speaker manufacturer's recommendation for enclosure type. Below are a few characteristics of sealed and ported enclosures:

### Sealed Enclosures

- Smaller enclosure size
- Excellent transient response
- Less output per watt, but punchier, tighter sound
- Lower dynamic output


### Ported/Vented Enclosure


- Larger enclosure size
- Extended low frequency response
- More bass output per watt
- Better dynamic output


If you have the space, we recommend a slot vented enclosure for the best all-around bass experience.

## Enclosure Size... It Matters

Once you decide on a sealed or ported enclosure, you can fine-tune the size of the enclosure to fit your vehicle space and listening habits. For both sealed and ported enclosures, we list recommended size ranges, (MIN - IDEAL - MAX) for each subwoofer size in the following pages. Whether buying pre-made or designing and building a custom enclosure, try to stay within these parameters for the best overall performance. Below is the effect enclosure size has on the overall sound.

 The MIN value is the smallest recommended enclosure size. It provides the most compact size, but sacrifices some low bass response. It generally provides punchy, tight bass that is great for Rock and Country music.

 The IDEAL value is recommended for most listeners. Excellent blend of low bass, with accurate and strong overall output. Suited well for Pop and R&B music.

 The MAX value is the largest recommended enclosure size. It's big, but provides exceptional bass output. Perfect for all you Hip Hop and EDM fans.

**Enclosure size recommendations do not include driver and / or port displacement.**

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**AudioControl**<sup>®</sup>

Making Good Sound Great<sup>™</sup>



# SPC-10S2 Specifications

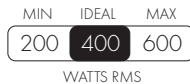
## Thiele/Small Parameters

Nominal Impedance (Z)	2 ohms
DC Resistance (Re)	1.8 ohms
Resonance Frequency (Fs)	37.48 Hz
Piston Area (Sd)	0.0330 m <sup>2</sup>
Force Factor (BL)	10.03 T.m
Mechanical Q Factor (Qms)	4.0332
Electrical Q Factor (Qes)	0.4879
Total Q Factor (Qts)	0.4353
Sensitivity 1W/M (SPL)	86.0912
Mechanical Comp (Cms)	0.1554 mm/N
Moving Mass (Mms)	116.0099 g
Linear Excursion (Xmax)	9 mm
Volume Acoustic Comp (Vas)	23.6364 Ltr/0.834712 cu ft
Reference Efficiency (NO.)	0.25%
RMS Power (Pe)	400 Watts

## Other Fun Facts

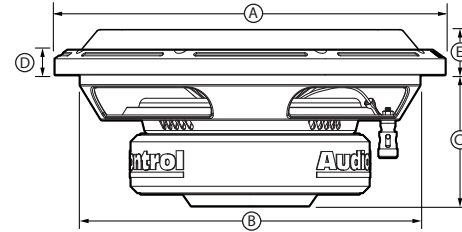
Frequency Response	20–250 Hz
Voice Coil Diameter	2.5 in/63.5 mm
Displacement	0.045 cu ft/1.275 Ltr

## Continuous Power Handling



## Dimensions

Overall Diameter (A)	10.39 in/264 mm
Cut Out Diameter (B)	9.13 in/232 mm
Mounting Depth (C)	3.50 in/89 mm
Mounting Height (w/o Grille) (D)	.071 in/18 mm
Mounting Height (w/ Grille) (E)	1.22 in/31mm

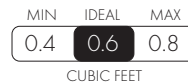


## Ported Enclosure



Internal volume range (Cu.Ft.)	0.9–2.0
Enclosure tuning range (Hz)	33–45

## Sealed Enclosure



Internal volume range (Cu.Ft.)	0.4–0.8
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# SPC-10S4 Specifications

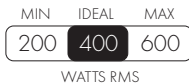
## Thiele/Small Parameters

Nominal Impedance (Z)	4 ohms
DC Resistance (Re)	3.2 ohms
Resonance Frequency (Fs)	37.3460 Hz
Piston Area (Sd)	0.0330 m <sup>2</sup>
Force Factor (BL)	14.0082 T.m
Mechanical Q Factor (Qms)	2.8618
Electrical Q Factor (Qes)	0.4044
Total Q Factor (Qts)	0.3543
Sensitivity 1W/M (SPL)	87.2957
Mechanical Comp (Cms)	0.1719 mm/N
Moving Mass (Mms)	105.6787 g
Linear Excursion (Xmax)	9 mm
Volume Acoustic Comp (Vas)	26.1432 Ltr/0.923238 cu ft
Reference Efficiency (NO.)	0.32%
RMS Power (Pe)	400 Watts

## Other Fun Facts

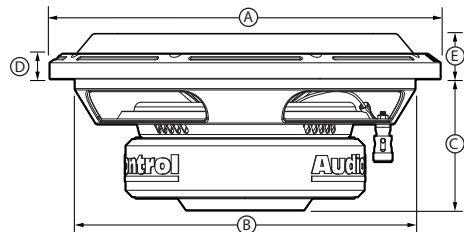
Frequency Response	20–250 Hz
Voice Coil Diameter	2.5 in/63.5 mm
Displacement	0.045 cu ft/1.275 Ltr

## Continuous Power Handling



## Dimensions

Overall Diameter (A)	10.39 in/264 mm
Cut Out Diameter (B)	9.13 in/232 mm
Mounting Depth (C)	3.50 in/89 mm
Mounting Height (w/o Grille) (D)	.071 in/18 mm
Mounting Height (w/ Grille) (E)	1.22 in/31mm

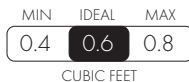


## Ported Enclosure



Internal volume range (Cu.Ft.)	0.9–2.0
Enclosure tuning range (Hz)	33–45

## Sealed Enclosure



Internal volume range (Cu.Ft.)	0.4–0.8
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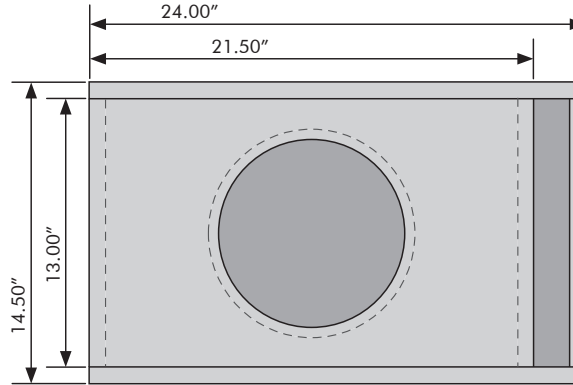
Making Good Sound Great™



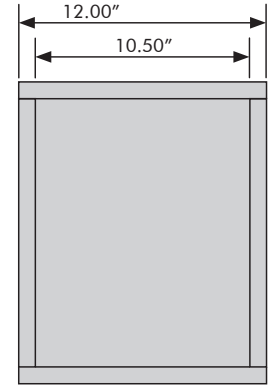
# SPC-10S2/10S4 Ported Enclosure

## Specifications

External Dimensions..... 24.00" W × 14.50"H × 12.00"D  
**Net Internal Volume ..... 1.40 ft3**  
 Total Internal Volume..... 1.75 ft3  
 Gross External Volume ..... 2.38 ft3  
 Material Thickness..... 0.75"  
 Tuning Frequency ..... 40 Hz  
 Port Area..... 22.75 inch<sup>2</sup>  
 Port Inlet ..... 1.75"W × 13.00"H  
 Port Length ..... 22.25"  
 F3 (Hz)..... 34



FRONT VIEW

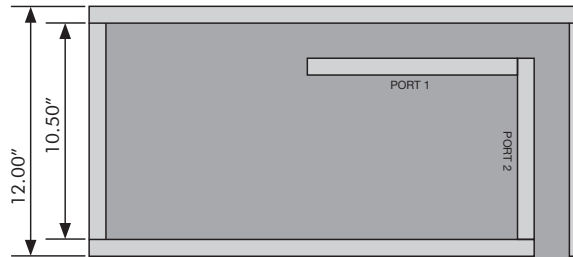


LEFT SIDE

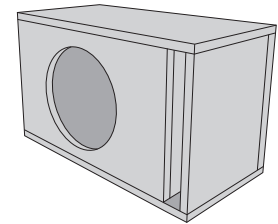
## Material Prep

Top / Bottom	24.00" × 12.00"	2
Front	21.50" × 13.00"	1
Rear	24.00" × 13.00"	1
Left	10.50" × 13.00"	1
Right	11.25" × 13.00"	1
Port 1	10.25" × 13.00"	1
Port 2	8.75" × 13.00"	1

\*Please note there are no fingers mentioned in the list above. Cut safe my friends.



TOP VIEW



# SPC-10S2/10S4 Sealed Enclosure

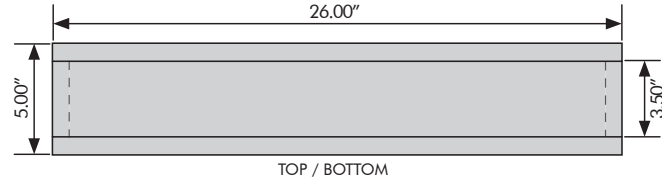
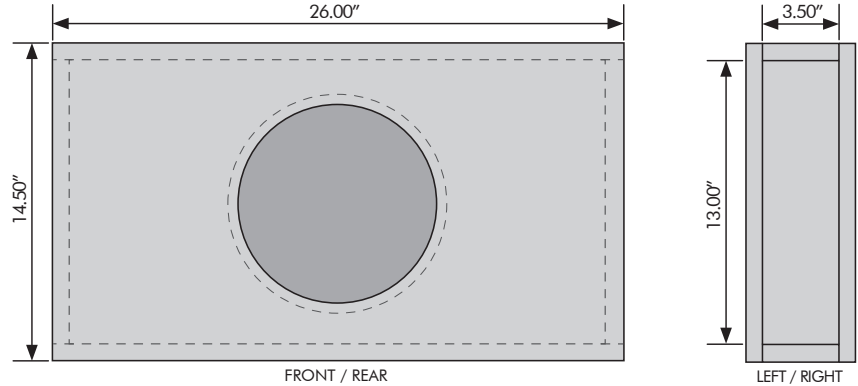
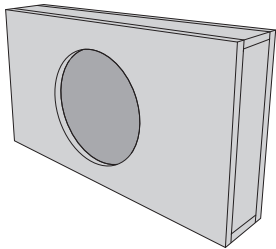
## Specifications

External Dimensions.....26.00" W × 14.50"H × 5.00"D  
**Net Internal Volume** .....**0.60 ft3**  
 Total Internal Volume.....0.65 ft3  
 Gross External Volume.....1.09 ft3  
 Material Thickness.....0.75"  
 F3 (Hz)......60  
 Qtc......0.703

## Material Prep

Front / Rear	26.00" × 14.50"	2
Top / Bottom	26.00" × 3.50"	2
Left / Right	13.00" × 3.50"	2

\* Please note there are no fingers mentioned in the list above. Cut safe my friends.





# SPC-12S2 Specifications

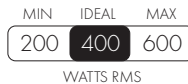
## Thiele/Small Parameters

Nominal Impedance (Z)	2 ohms
DC Resistance (Re)	1.8 ohms
Resonance Frequency (Fs)	27.8430 Hz
Piston Area (Sd)	0.0511 m <sup>2</sup>
Force Factor (BL)	10.3379 T.m
Mechanical Q Factor (Qms)	4.0762
Electrical Q Factor (Qes)	0.4703
Total Q Factor (Qts)	0.4216
Sensitivity 1W/M (SPL)	87.3655
Mechanical Comp (Cms)	0.2047 mm/N
Moving Mass (Mms)	159.6086 g
Linear Excursion (Xmax)	9 mm
Volume Acoustic Comp (Vas)	74.5578 Ltr/2.632984 cu ft
Reference Efficiency (NO.)	0.33%
RMS Power (Pe)	400 Watts

## Other Fun Facts

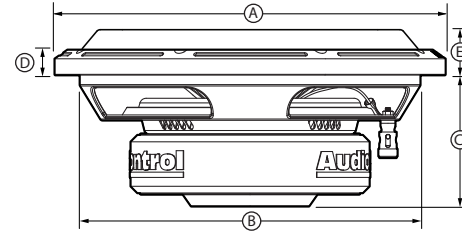
Frequency Response	20–250 Hz
Voice Coil Diameter	2.5 in/63.5 mm
Displacement	0.0619 cu ft/1.752 Ltr

## Continuous Power Handling



## Dimensions

Overall Diameter (A)	12.37 in/316 mm
Cut Out Diameter (B)	11.10 in/282 mm
Mounting Depth (C)	3.94 in/100 mm
Mounting Height (w/o Grille) (D)	.071 in/18 mm
Mounting Height (w/ Grille) (E)	1.42 in/36mm

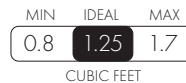


## Ported Enclosure



Internal volume (Cu.Ft.)	1.2–2.0
Enclosure tuning range (Hz)	32–40

## Sealed Enclosure



Internal volume (Cu.Ft.)	0.8–1.7
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# SPC-12S4 Specifications

## Thiele/Small Parameters

Nominal Impedance (Z)	4 ohms
DC Resistance (Re)	3.2 ohms
Resonance Frequency (Fs)	30.7061 Hz
Piston Area (Sd)	0.0511 m <sup>2</sup>
Force Factor (BL)	12.4924 T.m
Mechanical Q Factor (Qms)	3.7494
Electrical Q Factor (Qes)	0.5764
Total Q Factor (Qts)	0.4996
Sensitivity 1W/M (SPL)	87.3024
Mechanical Comp (Cms)	0.1844 mm/N
Moving Mass (Mms)	145.7101 g
Linear Excursion (Xmax)	9 mm
Volume Acoustic Comp (Vas)	67.1494 Ltr/2.371348 cu ft
Reference Efficiency (NO.)	0.32%
RMS Power (Pe)	400 Watts

## Other Fun Facts

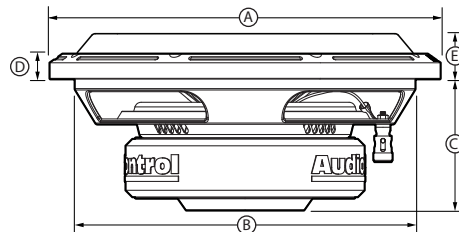
Frequency Response	20–250 Hz
Voice Coil Diameter	2.5 in/63.5 mm
Displacement	0.0619 cu ft/1.752 Ltr

## Continuous Power Handling



## Dimensions

Overall Diameter (A)	12.37 in/316 mm
Cut Out Diameter (B)	11.10 in/282 mm
Mounting Depth (C)	3.94 in/100 mm
Mounting Height (w/o Grille) (D)	.071 in/18 mm
Mounting Height (w/ Grille) (E)	1.42 in/36mm

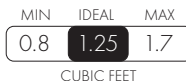


## Ported Enclosure



Internal volume (Cu.Ft.)	1.2–2.0
Enclosure tuning range (Hz)	32–40

## Sealed Enclosure



Internal volume (Cu.Ft.)	0.8–1.7
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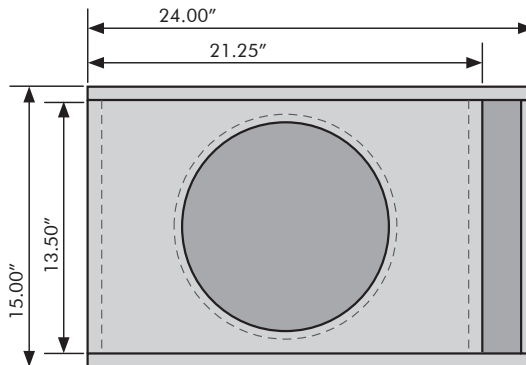
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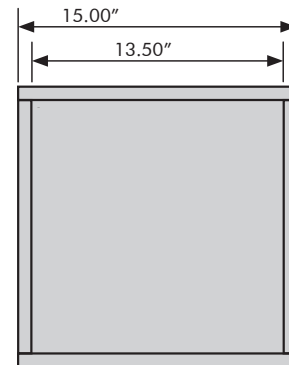
## SPC-12S2/12S4 Ported Enclosure

### Specifications

External Dimensions.....	24.00" W × 15.00"H × 15.00"D
<b>Net Internal Volume .....</b>	<b>2.02 ft3</b>
Total Internal Volume.....	2.28 ft3
Gross External Volume.....	3.01 ft3
Material Thickness.....	0.75"
Tuning Frequency.....	40 Hz
Port Area.....	27.00 inch <sup>2</sup>
Port Inlet.....	2.00"W × 13.50"H
Port Length.....	16.25"
F3 (Hz).....	40



FRONT VIEW

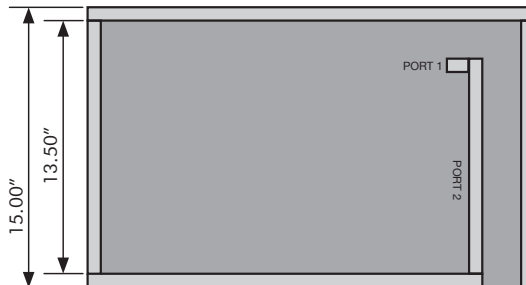


LEFT SIDE

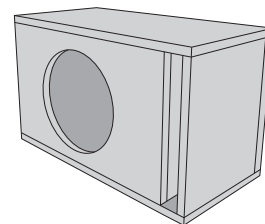
### Material Prep

Top / Bottom	24.00" × 15.00"	2
Front	21.25" × 13.50"	1
Rear	24.00" × 13.50"	1
Left	13.50" × 13.50"	1
Right	14.25" × 13.50"	1
Port 1	1.25" × 13.50"	1
Port 2	11.50" × 13.50"	1

\*Please note there are no fingers mentioned in the list above. Cut safe my friends.



TOP VIEW



# SPC-12S2/12S4 Sealed Enclosure

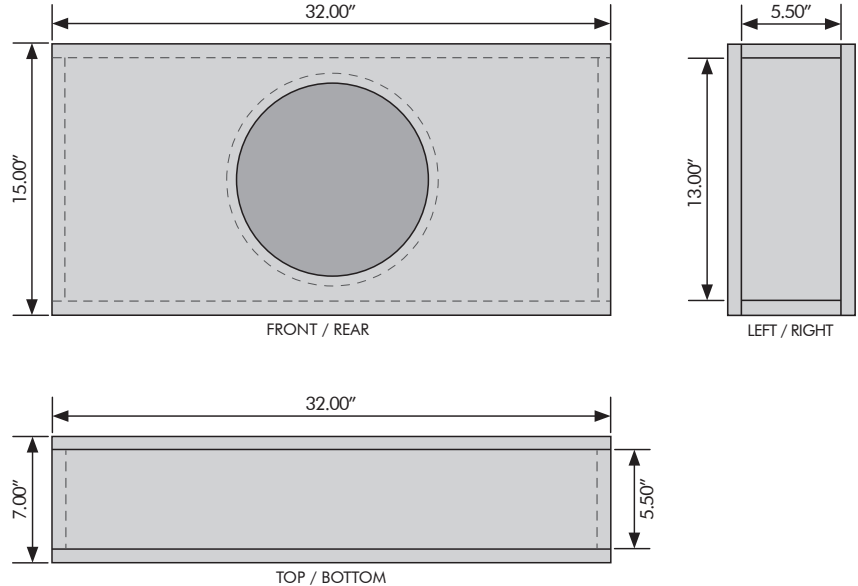
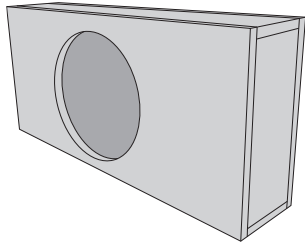
## Specifications

External Dimensions.....32.00" W × 15.00"H × 7.00"D  
**Net Internal Volume** .....**1.25 ft3**  
 Total Internal Volume.....1.31 ft3  
 Gross External Volume.....1.94 ft3  
 Material Thickness.....0.75"  
 F3 (Hz).....51  
 Qtc.....0.765

## Material Prep

Front / Rear	32.00" × 15.00"	2
Top / Bottom	32.00" × 5.50"	2
Left / Right	13.50" × 5.50"	2

*\*Please note there are no fingers mentioned in the list above. Cut safe my friends.*





## The Warranty

In just the same way as being covered in honey and thrown into a dark pit full of hungry woodchucks, people are scared of warranties. Lots of fine print. Months of waiting around. Well, fear no more. This warranty is designed to make you rave about AudioControl. It's a warranty that looks out for you and your client, plus helps you resist the temptation to have your friend Sparky, who's "good with electronics," try to repair your AudioControl product. So go ahead, read this warranty, then register the information at [www.audiocontrol.com/product-registration](http://www.audiocontrol.com/product-registration) and include your comments.

Our warranty has conditional conditions! "Conditional" doesn't mean anything ominous. The Federal Trade Commission tells all manufacturers to use the term to indicate that certain conditions have to be met before they'll honor the warranty. If you meet all of these conditions, AudioControl will, at its discretion, repair or replace any AudioControl speaker products that exhibit defects in materials and/or workmanship for one (1) year from the date you bought it. We will repair or replace it, at our option, during that time.

### Here are the conditional conditions:

1. You must fully register your purchase within 15 days of the purchase date by going to the AudioControl product registration page at:  
[www.audiocontrol.com/product-registration](http://www.audiocontrol.com/product-registration)  
Failure to register your product will negate the warranty.
2. You need to hold on to your sales receipt! All warranty service requires original sales receipt documentation. The warranty only applies to the original purchaser from an authorized AudioControl dealer. Note: Products purchased from unauthorized dealers are not covered under warranty.
3. The AudioControl speaker products must have originally been purchased

from an authorized AudioControl dealer. **If an authorized AudioControl dealer installs your AudioControl product, the warranty is extended to two (2) years.**

4. Our warranty covers AudioControl products that have been installed according to the instructions in this manual.
5. You cannot let anyone who isn't: (A) the AudioControl factory; or (B) someone authorized in writing by AudioControl, service your AudioControl product. If anyone other than (A), or (B) messes with your AudioControl product, the warranty is void.
6. The warranty is void if the serial number is altered, defaced or removed, or if your product has been used improperly. Now that may sound like a big loophole, but here is what we mean by this: Unwarranted abuse is: (A) physical damage (don't use your product to pound in fence posts); (B) improper connections (120 volts into the speaker terminals can fry the poor thing). This is the best product we know how to build, but for example, if you mount it to the front bumper of your car, drop it over Niagara Falls, or use it for anchoring your boat, something will go wrong.

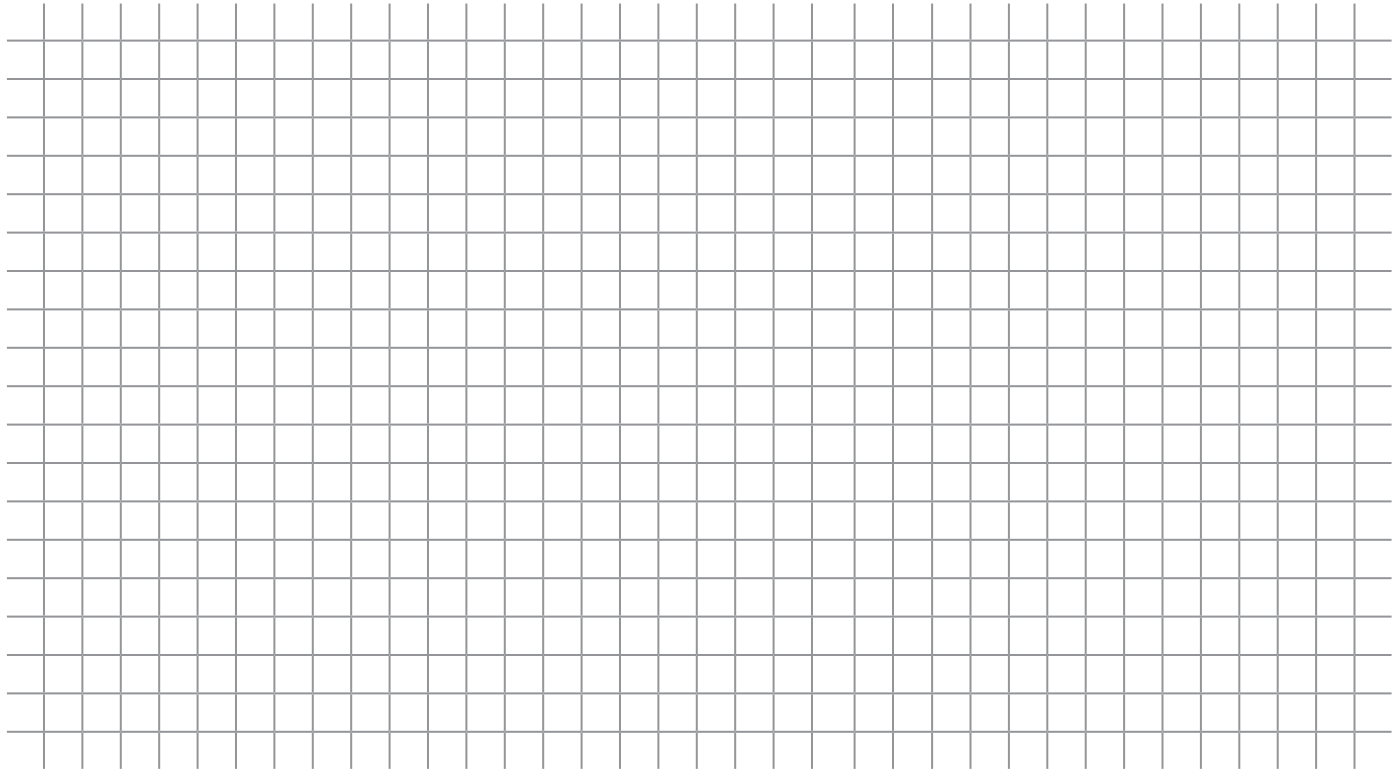
Assuming you conform to 1 through 6, and it really isn't all that hard to do, we get the option of fixing your product, or replacing it with a new one, at our discretion.

In the event that your product is out of warranty or not covered under our warranty you may request to have any damage repaired at our normal "Out of Warranty" repair cost.

## Legalese

The warranty above is the only warranty issued by AudioControl. This warranty gives you specific legal rights, and you may also have rights that vary from state to state.

Promises of how well your AudioControl product will work are not implied by this warranty. Other than what we've said we'll do in this warranty, we have no obligation, express or implied. We make no warranty of merchantability or fitness for any particular purpose. Also neither we nor anyone else who has been involved in the development or manufacture of the unit will have any liability of any incidental, consequential, special or punitive damages, including but not limited to any lost profits or damage to other parts of your system by hooking up to the unit (whether the claim is one for breach of warranty, negligence of other tort, or any other kind of claim). Some states do not allow limitations of consequential damages.



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For more information about this fine product, and for additional details of the limited warranty and repair services, please visit **[www.audiocontrol.com](http://www.audiocontrol.com)**

For technical questions, please visit **[www.audiocontrol.com/knowledge-base/](http://www.audiocontrol.com/knowledge-base/)**

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email: [sound.great@audiocontrol.com](mailto:sound.great@audiocontrol.com)

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*As technology advances, AudioControl reserves the right to continuously change our specifications, like our Pacific Northwest weather, although we are working on changing that as well.*

