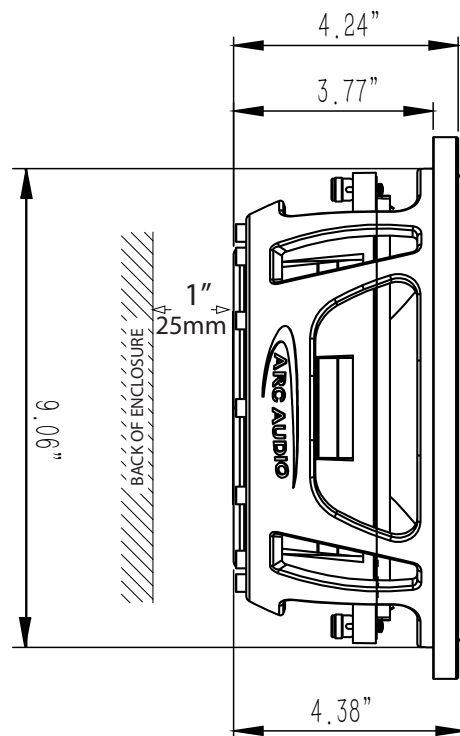


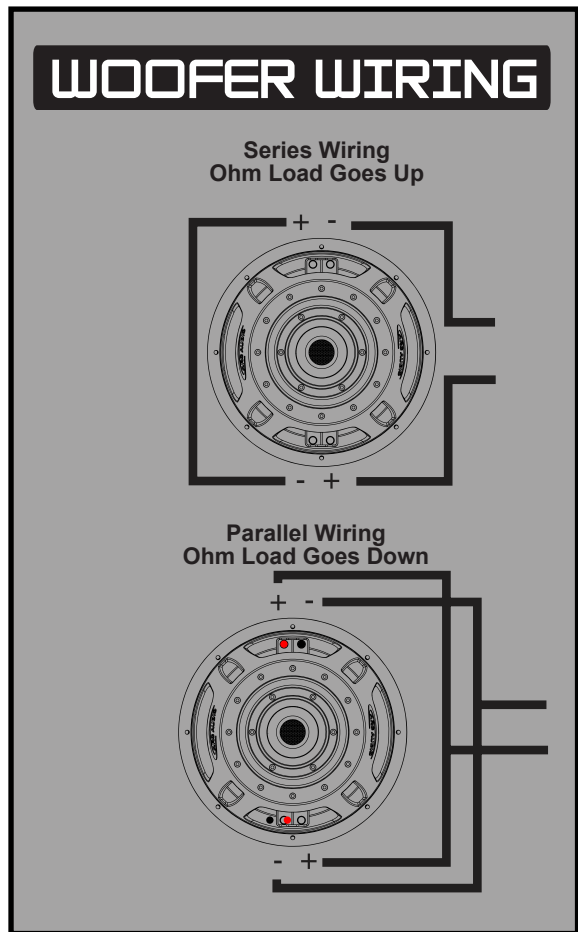


Cutout Diameter	9.06"
Mounting Depth	3.77"
Total Depth	4.24"
Outside Diameter	10.08"
Musical Power Handling	500 Watts
RMS Power Handling	250 Watts
Sensitivity 1 Watt @ 1 Meter	85.4dB
Sealed Enclosure (Minimum)	0.40 cuft (Gross)
Sealed Enclosure (Optimum)	0.60 cuft (Gross)
Sealed Enclosure (Maximum)	0.90 cuft (Gross)
Ported Enclosure	
Port Diameter / Length	TBA
Tuning Frequency	



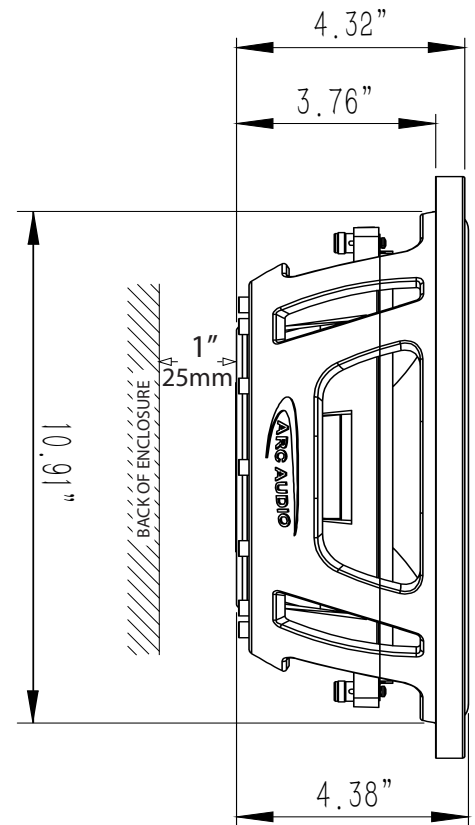
T/S PARAMETERS

	A10D2	A10D4
REVC	3.9 Ohms	7.466 Ohms
Fo	26.995 Hz	26.995 Hz
Sd	34.636m	34.636m
M?Md	168.00 g	140.00 g
BL	13.766 T	18.090 T
Qms	7.155	6.744
Qes	.511	.547
Qts	.477	.506
No	.150%	.145%
SPL	84.8 dB	84.6 dB
Vas	40.413 L	41.819m L
Cms	237.237u M/N	245.487u M/N
Krm	15.089m Ohm	25.121m Ohm
Erm	.780	.779
Mms	146.543 g	141.589 g
Mmd	142.807 g	137.883 g
Kxm	51.166 mH	88.403m H
Exm	.693	.687





Cutout Diameter	10.91"
Mounting Depth	3.76"
Total Depth	4.32"
Outside Diameter	12.17"
Musical Power Handling	600 Watts
RMS Power Handling	300 Watts
Sensitivity 1 Watt @ 1 Meter	87dB
Sealed Enclosure (Minimum)	0.85 cuft (Gross)
Sealed Enclosure (Optimum)	1.00 cuft (Gross)
Sealed Enclosure (Maximum)	1.25 cuft (Gross)
Ported Enclosure	
Port Diameter / Length	TBA
Tuning Frequency	

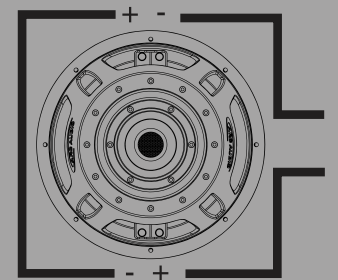


T/S PARAMETERS

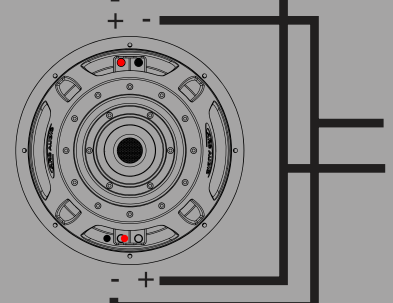
	A12D2	A12D4
REVC	3.88 Ohms	7.200 Ohms
Fo	25.010 Hz	26.995 Hz
Sd	53.093m	53.093m
M?Md	210.00 g	195.55 g
BL	13.948 T	16.965 T
Qms	7.639	7.656
Qes	.666	.722
Qts	.612	.659
No	.173%	.126%
SPL	85.4 dB	86.4 dB
Vas	76.323 L	81.813m L
Cms	190.673u M/N	204.389u M/N
Krm	17.676m Ohm	23.079m Ohm
Erm	.770	.787
Mms	212.384 g	170.060 g
Mmd	205.384 g	163.026 g
Kxm	42.311 mH	83.744m H
Exm	.721	.691

WOOFER WIRING

Series Wiring
Ohm Load Goes Up



Parallel Wiring
Ohm Load Goes Down



USEFUL INFORMATION

Useful Information

Ultimately the enclosure you build determines the performance of your subwoofer. The size and port tuning frequency of a ported box determines the low-frequency extension and output of the subwoofer. This ARC Audio subwoofer is designed to perform well when used in both sealed and ported enclosures.

The acoustics of your vehicle influence bass response. The small interior size of most cars and trucks boosts low frequencies dramatically. A smaller enclosure than normal may be needed to achieve a flat bass response. As a rule, below 50Hz (depending on cabin size), bass response increases at about 12dB per octave as the frequency decreases. This "Cabin Gain" adds significant bass output to the subwoofer system.

Recommendations are included in this manual for both sealed and ported enclosure types. The sealed enclosure design will, in most cases, give you the best sound quality and take up less space in your vehicle. The ported box design will offer more output than the sealed enclosure (about 3 - 4 dB more), but it will reduce the power handling and require more space to install. The recommended ported enclosure is not designed for "competition SPL" performance, it is designed for normal listening. It will increase the low frequencies output and increase the overall volume while still sounding good when properly tuned and installed.

A Note About Power Handling

ARC Audio woofers are designed to perform for years without any problems. The RMS power noted under the specifications is the recommended continuous power for long term use. All woofers generate heat. It is possible to dissipate only so much of this heat. The woofer can handle as much as twice its rated RMS power for short periods. This is the MAX power rating. Continued use of this woofer at greater than the RMS power rating will result a damaged (burnt) voice coil. This damage is considered abuse and is NOT covered under the warranty.

Small Amp Myth

Under powering a woofer is fine. This woofer will suffer no damage from a 100 watt amp if it is correctly tuned. However, even a small amp that is being over driven (clipped) can destroy a sub. Use your power wisely. Clipping can be heard as a dull thud or a popping sound. If you hear any change in the tone of your subwoofer this is a danger sign. TURN IT DOWN. If you want more volume get a bigger amp or add another woofer.

Physics

"Energy cannot be created or destroyed, only change forms". What does this mean? Your amp does not make power, it takes power from your battery and converts it into a different form. The subwoofer is just another kind of converter. It changes AC voltage from the amp into changes in air pressure (that's all sound is) and HEAT. The more energy being converted the more heat. A speaker can not reproduce DC voltage (produced when an amp clips) but this energy must go somewhere. It is all converted into heat. This is why clipping is so dangerous to a speaker.

A great deal of energy can also be lost in the enclosure. If your box is not strong enough the sides will flex. It takes energy to flex the box. This energy is not being converted into sound. In short, the stronger the box the less energy will be lost. So build it strong.

This same thing can happen to the car body. Sound deaden, it will sound better and hit harder.

Building an Enclosure

It is recommended that you use 3/4" MDF (Medium Density Fiberboard) to build an enclosure. Glue all your joints with yellow glue and secure them with screws or nails.

Make sure the enclosure will fit and that you have adequate room to get it in and out of the vehicle.

Calculating Enclosure Volume

It is difficult to give exact box dimensions that are universal for all cars and trucks. It is for this reason that you must be able to calculate the space in which you have available in order to achieve the proper air volume required.

Calculating External Volume

1) To calculate box volume, measure the outside Width x Height x Depth of the enclosure.

Example $12" \times 14" \times 9" = 1512$ cubic inches.

2) Next convert cubic inches into cubic feet. To do this, you must divide the cubic inch total by 1728 .

Example $1512 \text{ cu in} \div 1728 = .875$ Cubic feet.

Calculating Internal Volume

1) To calculate the internal (net) volume of the above box first multiply the thickness of the wood you are using by Two (2).

Example: $\frac{3}{4}" \times 2 = 1 \frac{1}{2}"$

2) Next subtract 1.5" from each of the outside measurements of the box. Width $12" - 1.5" = 10.5"$. Height $14" - 1.5" = 12.5"$. Depth $9" - 1.5" = 7.5"$

3) Multiply the new totals (H x W x D)

Example: $10.5" \times 12.5" \times 7.5" = 984.375$ cubic inches.

4) Now convert cubic inches into cubic feet. To do this, you divide the cubic inch total by 1728.

Example $984.375 \div 1728 = .5696$ cubic feet.

For additional information call ARC Audio Tech support at:

209-543-8706