

HIFONICS®
C A R A U D I O
POWER FROM THE GODS

ZEUS

SUBWOOFERS

ZRX12D4 / ZRX12SQD4
ZRX15SQD2 / ZRX15SQD4

H I F N I C S

ZEUS SERIES

CAR AUDIO SUBWOOFERS

Congratulations on your purchase of the new Hifonics ZEUS Series subwoofer system. As Hifonics celebrates 25 years of shaking the mobile audio industry, the ZEUS subwoofer series has been revived. The ZEUS subwoofer series has a reputation in the industry as one of the most efficient and loudest subwoofers in its' price range. The ZEUS subwoofers feature new cosmetics, accurate bass reproduction through a wide range of frequencies, and impressive power handling capabilities.

- Available In 12" Round, 12" Square And 15" Square Models
- DVC 2-Ohms And DVC 4-Ohms
- 2" High Temp Voice Coil
- Rubber Surround
- Nomex Spider With Woven Tinsel Leads
- Injected Polypropylene Cone
- Push & Insert Speaker Terminals
- Heat Dispersing Ported Nickel Plated Back Plate
- Ultra Ridged Stamped Steel Basket
- Protective ABS Motor Cap

As with all high quality car audio products, we recommend professional installation by an authorised Hifonics dealer. Your dealers knowledge and experience can ensure a problem free and cosmetically integrated installation. If you choose to install the subwoofers yourself, please read the entire manual very carefully.

**Check out our videos of new products,
events and technical tutorials at
www.youtube.com/maxxsonicsusainc**

SUBWOOFER INSTALLATION AND WIRING DIRECTIONS

Enclosure Materials

Typically, 5/8" or 3/4" MDF (Medium Density Fiber Board) is best for most applications. 3/4" MDF is recommended.

Enclosure Build Materials

Connecting joints need to be glued and screwed to ensure no air escapes and joints do not separate under high pressure. Mitered and rabbit joints also help to ensure the enclosure joints are secure.

Bracing

Internal bracing is also recommended to prevent flexing and to strengthen the enclosure.

Note: The volume taken up by the bracing should be added to the total enclosure interior volume.

There are two common bracing methods.

1. Corner Bracing: These help prevent the connection joints from separating under heavy vibration and air pressure.

Use 1' x 1" MDF at all interior joints

2. Diagonal Bracing: These internal braces connect the top side to the bottom side as well front side to back side. This prevents the wood from bowing or pushing outwards.

Use 1" x 2" with 1" surface contact that is glued and screwed.

Wiring

Wiring Parallel, Series or Parallel/Series will affect the final impedance at the amp and great care must be taken to ensure the amp is not driven below its intended impedance capabilities.

ZEUS SERIES SUBWOOFERS

ELECTRICAL	ZRX12D4	ZRX12SQD4	ZRX15SQD2	ZRX15SQD4	
Wiring	<u>Series</u>	<u>Series</u>	<u>Series</u>	<u>Series</u>	
NomZ	9.276	9.264	5.004	9.036	Ohm
Sd	0.0515	0.0696	0.1225	0.1225	sqM
Revc	7.73	7.72	4.17	7.53	Ohm
BL	17.74	17.495	14.273	17.098	TxM
Vas	90.73	135.49	303.48	320.8	Liter
Cms	241.3	196.4	142.42	150.54	uM/N
Mms	134.8	195.5	269.7	269.7	Grams
Fo	27.9	26	25.68	24.98	Hz
Qms	5.597	6.1	7.37	6.95	
Qes	0.581	0.796	0.891	1.09	
Qts	0.526	0.704	0.795	0.942	
no	0.328	0.288	0.558	0.443	%
SPL@1W	87.18	86.47	89.48	88.49	dB
SPL@2.83V	87.45	86.9	92.44	88.87	dB
Xmax/Over Hang	7	7	7	7	mm
Xmech/Suspension	20	20	20	20	mm
Watt@RMS	500	500	500	500	Watts
Watt@PEAK	1000	1000	1000	1000	Watts

ZEUS SERIES SUBWOOFERS

ZRX12D4	ZRX12SQD4	ZRX15SQD2	ZRX15SQD4
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CLOSED BOX DESIGNS (SEALED)

Standard Tight Bass-Small Box

Box Volume	1.25	1.25	2.5	2.5	Cubic Feet
Qtc	0.97	1.49	1.73	2.06	
F3	43	41	42	41	Hz

VENTED BOX DESIGNS (ROUND PORT)

Standard Tight Bass-Small Box

Box Volume	1.5	1.75	3	3	Cubic Feet
Fb	38	39	39	39	Hz
Port Size (Inside Diameter)	3	4	2qty 3"	2qty 3"	Inches
Port Length	7.25	11.75	6.5"	6.5"	Inches
F3	38	38	43	42	Hz

Optimal Sound Quality-Flat Response

Box Volume	2	2.25	3.5	3.5	Cubic Feet
Fb	36	36	36	36	Hz
Port Size (Inside Diameter)	1qty 4"	2qty 3"	2qty 4"	2qty 4"	Inches
Port Length	11.5	12.22	14	14	Inches
F3	34	35	40	40	Hz

FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: All above box volumes are internal values and already include subwoofer and port displacement. Volume listed represents the volume of an empty box.

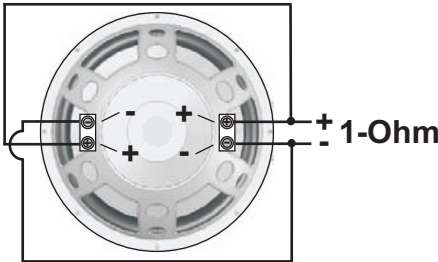
The F3 value represents the -3db cut off of the subenclosure combination in Hz.

Glossary of Terms

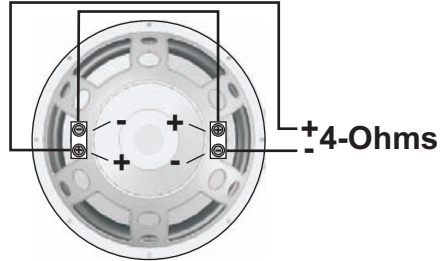
- Q The energy losses of relative damping (ratio of stored to dissipated energy or ratio of reactive to resistive energy).
- F_s Free air resonance of driver in Hz.
- Q_{ms} Mechanical Q.
- V_{as} Volume of air equivalent to driver from the rest position.
- C_{ms} Mechanical compliance of a loud speaker piston.
- M_{ms} Moving mass of total loud speaker piston assembly.
- X_{max} The maximum linear excursion of a loud speaker.
- S_d Surface area of the cone.
- D_{ia} The piston diameter of a loud speaker.
- Q_{es} Electrical Q of a system.
- R_e DC resistance.
- L_e VC inductance.
- P_e Maximum input power.
- Q_{ts} Total Q of the system.
- Sens Sensitivity. An efficiency measurement in dB's.
- V_c Volume of a closed or sealed enclosure
- V_b Volume of a vented enclosure.
- F_c The resonant frequency of a closed or sealed system
- F_b The resonant frequency of a vented system
- F₃ The half-power (-3dB) frequency of a loud speaker enclosure
- Q_{tc} The Q of a loud speaker at F_c in a closed box, considering both it's electrical and mechanical resistance.
- Q_L The Q of a vented box, resulting from all box losses.
- D_V Diameter of vent.
- L_V Length of vent.
- H Height.
- W Width.
- D Depth

DVC 2-Ohms

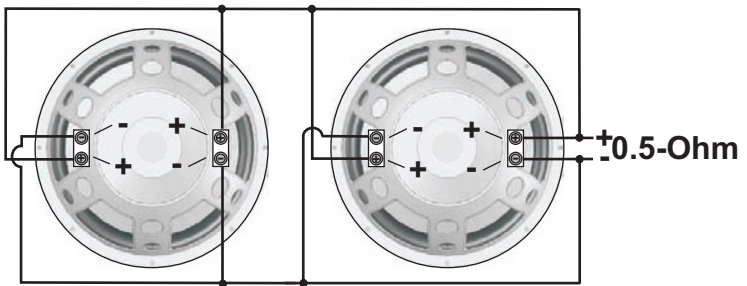
Parallel



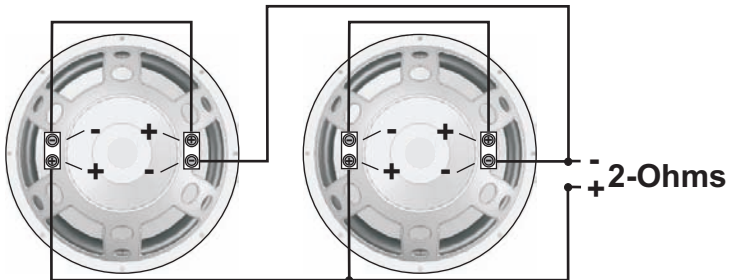
Series



Parallel Coils / Parallel Subs

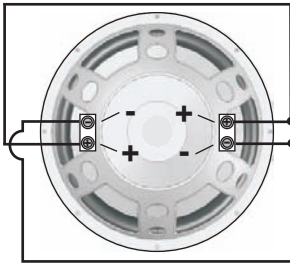


Series Coils / Parallel Subs



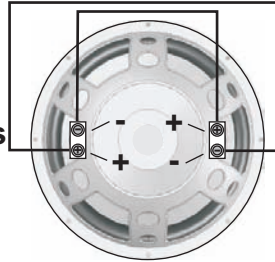
DVC 4-Ohms

Parallel



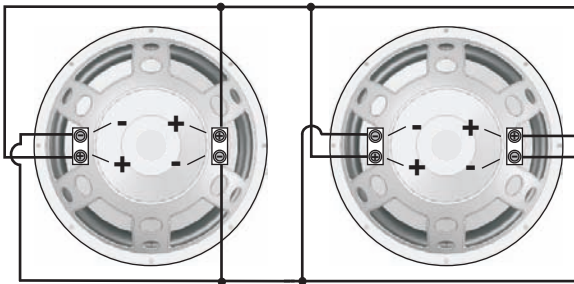
+2-Ohms

Series



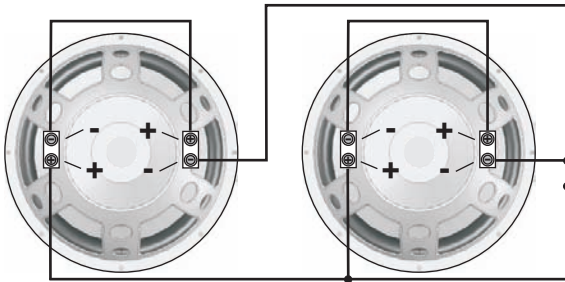
+8-Ohms

Parallel Coils / Parallel Subs



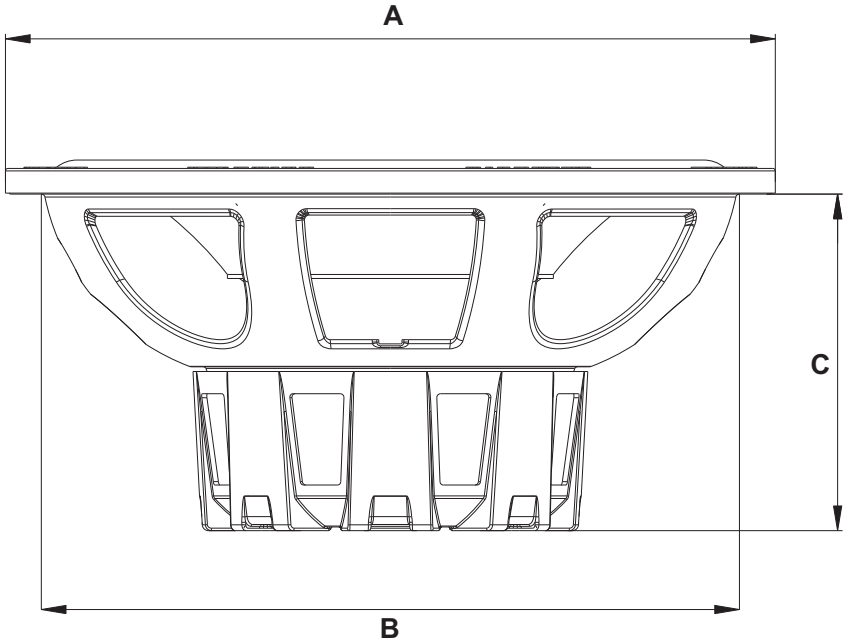
+1-Ohm

Series Coils / Parallel Subs



+4-Ohms

Subwoofer Dimensions



	ZRX12D4	ZRX12SQD4	ZRX15SQD2/D4
A	12.28"	12.76" x 12.76"	15.63" x 15.63"
B	11.14"	11.38" x 11.38"	13.7" x 13.7"
C	5.37"	5.93"	6.81"

★Due to the vented backplate, you must allow for an additional 2" behind the subwoofer when designing your speaker enclosure.

Maxxsonics Limited Warranty

As the manufacturer of Maxxsonics, MB Quart, Autotek, Crunch and Hifonics car audi products, Maxxsonics USA Inc. Warrants to the original consumer purchaser the amplifier to be free from defects in material and workmanship for one (1) Year from date of purchase.

All other parts and accessories of the system are warranted to be free from defects in material and workmanship for one (1) year from date of purchase. Maxxsonics will repair or replace at it's option and free of charge during the warranty period, any system component that proves defective in materials and workmanship under normal installation, use and service provided that the product is returned to the authorized Maxxsonics dealer from where it was purchased. A photo copy of the original receipt must accompany the product being returned.

Valid purchase receipts will contain the name and address of the authorized reseller.

Any damage to the product as a result of misuse, abuse, accident, incorrect wiring, improper installation, alteration of date code or bar code labels, revolution, natural disaster, or any sneaky stuff because someone messed up, repair or alteration out side of our factory or authorized service centers and any thing else you have done that you should not have done is not covered.

This warranty is limited to defective parts and specifically excludes any incidental or consequential damages connected therewith. This warranty is not to be construed as an insurance policy.

Warranty on installation labor, removal, re-installation and freight charges are not the responsibility of Maxxsonics USA Inc.

Warranty products damaged as a result of insufficient or improper packing materials are not covered by this limited warranty and such damaged product will be returned "as is" at the expense of the owner.



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