



## IDQ SHALLOW MOUNT SUBWOOFER

IDQS-8  
IDQS-10  
IDQS-12



## OWNERS MANUAL

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Please read through this manual to familiarize yourself with your new subwoofer. Should your Image Dynamics subwoofer ever require service, you will need to have the original dated receipt.



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Δ Caution Δ

High powered audio systems in a vehicle are capable of generating higher than "Live Concert" levels of sound pressure. Continued exposure to excessively high volume sound levels could cause hearing loss or damage. Also, operation of a motor vehicle while listening to audio equipment at high volume levels may impair your ability to hear external sounds such as horns, warning signals, or emergency vehicles—thus creating a potential traffic hazard. In the interest of safety, Image Dynamics USA highly recommends listening at lower volume levels when driving.

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# IMAGE DYNAMICS IDQ SHALLOW SUBWOOFER

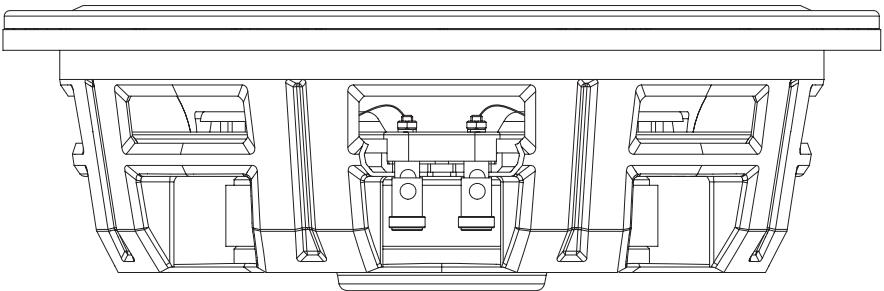
**Shallow Mount Design** to fit in small sealed enclosures for more mounting options without sacrificing sound quality.

**Parabolic Santoprene Surround** to ensure cone linearity and control.

**Poly/Mica Cone** for strong and distortion free bass reproduction while still reproducing all the musical nuances.

**Nomex Spider** for consistent control throughout the piston range and life of the woofer.

**Poly Carbonate Neck Joint** allows the woofer to handle more raw power without any mechanical failure or flex and isolate the heat from the BASV voice coil former from the cone.



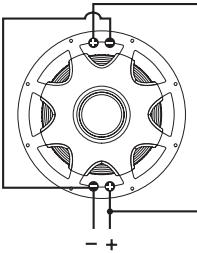
# WIRING GUIDELINES

It is highly recommended that you seek an authorized Image Dynamics dealer to properly setup, wire and install your woofers for maximum performance.

There are multiple ways to wire your woofers depending on your amplifier and system configuration. The use of multiple voice coils offers you more versatility in system configuration. It is important to know the limits of your amplifier to optimize its performance. It is always better to use your subwoofer in a mono / bridged mode if your amplifier has the capabilities. There are basically four different types of wiring configurations: Series, Parallel, Series-Parallel or Parallel-Parallel. It is possible to change the impedance or load by how the speakers are to be wired and by the quantity of woofers used.

## DUAL VOICE COIL WIRING (DUAL 4 OHM)

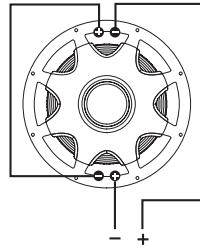
### PARALLEL



Amplifier

Parallel wiring a dual 4 ohm sub = 2 ohm

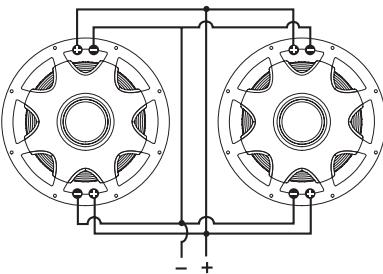
### SERIES



Amplifier

Series wiring a dual 4 ohm sub = 8 ohm

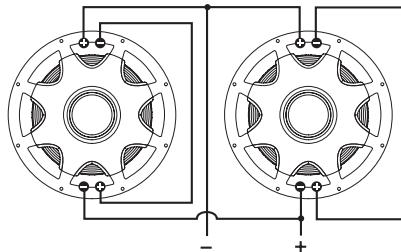
### PARALLEL-PARALLEL



Amplifier

Parallel-Parallel wiring two dual 4 ohm subs = 1 ohm

### SERIES PARALLEL

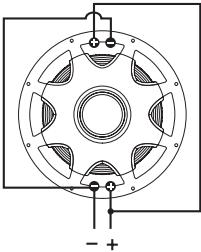


Amplifier

Series-Parallel wiring two dual 4 ohm subs = 4 ohm

# DUAL VOICE COIL WIRING (DUAL 2 OHM)

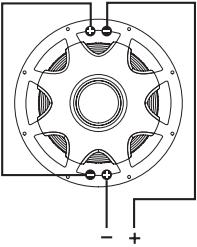
## PARALLEL



Amplifier

Parallel wiring a dual 2 ohm sub = 1 ohm

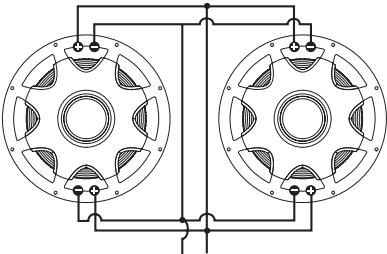
## SERIES



Amplifier

Series wiring a dual 2 ohm sub = 4 ohm

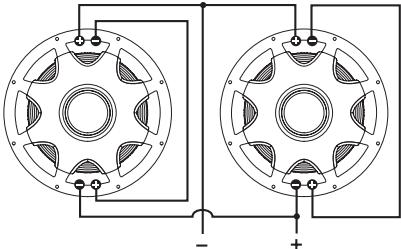
## PARALLEL-PARALLEL



Amplifier

Parallel-Parallel wiring two dual 2 ohm subs = 1/2 ohm

## SERIES PARALLEL



Amplifier

Series-Parallel wiring two dual 2 ohm subs = 8 ohm

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**NOTE:** Never connect only one coil of a Dual Voice Coil (DVC) speaker. BOTH voice coils must be connected to the amplifier

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## TIPS TO GET THE MOST OUT OF YOUR IMAGE DYNAMICS SHALLOW WOOFER

Your Image Dynamics subwoofer has been meticulously engineered and designed to handle high power musical reproduction. Despite their rugged construction, it is possible to damage your speaker if they are improperly used. In general, you will hear distortion as a so-called warning before any damage occurs. If you hear distortion in your system, immediately reduce the musical level to the point where the sound retains its clarity.

1. All Image Dynamics subwoofers require an initial break-in period before it will reach optimum performance. Like any new precision machinery, allow a minimum of several days to one week with normal daily usage to ensure that the suspension has properly been broken-in.
2. Be sure you supply the speakers with enough unclipped amplifier power to drive them properly. (More damage can be done to a speaker by under-powering and clipping your amplifier than any other way!)
3. Where possible, run your Speakers in mono instead of stereo. Most bass is reproduced in mono so there is less chance of any cancellation if played in mono.
4. Where possible, wire your Speakers in parallel instead of series. Bass is reproduced either way but again there is less chance of cancellation in parallel. **NOTE: Be sure the amplifier you are using is stable to the resulting impedance of the speaker load!**
5. Where possible, a separate amplifier just for your subwoofers should be used with an electronic crossover to set the frequency range. One amplifier with passive crossovers will work (Tri-Way Setup), but the system will do more with less stress on the amplifier by using two amps.
6. Do not block the front of your speakers. You want as much direct air coupling as possible.

## **BOX CONSTRUCTION**

The material used for enclosure walls should be solid, dense and free of voids or warps. Your enclosure should be made  $\frac{3}{4}$ " or 19mm material, Finland or Baltic birch type plywood is recommended where the enclosure will be transported frequently.

High-density fiberboard - MDF (not chip board) can be used on permanently installed systems. Minimum of 1" (25mm) or double  $\frac{3}{4}$ " (1-1/2") baffle is recommended on high-powered SPL applications.

Corners must be strong and air tight and should not have any air leaks or openings. Joints should be properly filled with glue that will not crack under high stress or impact. If the integrity of the glue seal can't be determined, hot glue or RTV caulking should be used to seal all seams.

Fiber reinforced resin may also be used to form any difficult shapes. However avoid making large panels with resin to eliminate any chances of box flexing, cracking or ratting under high pressure.

Bracing made of 2 x 2" or 2 x 4" should be liberally applied either inside or outside the cabinet, depending on whether the cabinet is to be permanently installed or portable. This principle applies to any walls of the enclosure spanning more than 18" long. Any braces should also be liberally glued or screwed down on edge. Edge-wise drilled, and countersunk holes through the braces can be used for #10-2 Flathead wood screws to avoid the use of more expensive lag bolts.

The majority of strength from an enclosure comes from the glue. When using screws be sure to pre-drill holes to avoid splitting the wood.

**WARNING!** The use of silicone rubber to seal in a speaker will void the Warranty! If any sealing is needed in addition to the speaker's gasket, use caulking cord or vinyl weather strip.

## **SUBWOOFER CROSSOVER SETTING**

Your Image Dynamics subwoofers will perform best if they are used in conjunction with a subwoofer crossover of some kind. Using a crossover will remove unwanted high frequencies and allow them to concentrate only on bass.

The two most common types of crossovers are "passive" or "active" (electronic crossovers are active). Many amplifiers have a built in Low Pass (LPF) electronic crossover circuit. For optimum subwoofer performance we recommend an initial electronic crossover setting between 50-100Hz and then tuning the bass to your liking.

# PARAMETERS FOR IDQ SHALLOW SERIES WOOFERS

(Due to Constant Improvements, Specifications and Parameters are subject to change without notice.)

	<b>IDQS8D2</b>	<b>IDQS8D4</b>	<b>IDQS10D2</b>	<b>IDQS10D4</b>
<b>VC Impedance (ohms)</b>	2Ω + 2Ω	4Ω + 4Ω	2Ω + 2Ω	4Ω + 4Ω
<b>Test Impedance (ohms)</b>	1Ω	2Ω	1Ω	2Ω
<b>Driver Displacement</b>	0.03	0.03	0.054	0.054
<b>Fs (Hz)</b>	53	53	50	50
<b>SD (sqCM)</b>	213.82	213.82	390.57	390.57
<b>Vas (Ltr)</b>	6.406	5.379	15.641	14.239
<b>Cms (M/N)</b>	98.67	82.862	72.203	65.736
<b>Mms (g)</b>	92.033	95.378	154.402	159.759
<b>BL™</b>	5.109	5.999	6.526	8.777
<b>Qms</b>	3.607	4.896	6.764	6.233
<b>Qes</b>	1.346	1.631	1.118	1.216
<b>Qts</b>	0.98	1.223	0.961	1.017
<b>No (%)</b>	0.0683%	0.0473%	0.169%	0.141%
<b>Spl (dB)</b>	82	82	84	84
<b>Xmax (mm)</b>	7mm	7mm	7.5mm	7.5mm
<b>Voice Coil Size (inches)</b>	1.5	1.5	2.0	2.0
<b>Voice Coil Height mm (inch)</b>	22 (0.87")	22 (0.87")	25 (0.98")	25 (0.98")
<b>Voice Coil Type / Former</b>	Kappton	Kappton	Kappton	Kappton
<b>Voice Coil Wire</b>	Copper	Copper	Copper	Copper
<b>DC Resistance (Ohms)</b>	1.15	1.73	1.03	1.9
<b>Voice Coil Induct @ 1 kHz (MH)</b>	0.37	0.32	0.43	0.34
<b>Frequency Response (Hz)</b>	50-500Hz	50-500Hz	50-500Hz	50-500Hz
<b>Resonant Freq. Fs Hz</b>	53	53	50	50
<b>HE-Magnetic Gap Height mm (inch)</b>	8 (0.314")	8 (0.314")	10 (0.393")	10 (0.393")
<b>Motor Structure (ounces)</b>	21.69 oz	21.69 oz	42.95 oz	42.95 oz
<b>Mounting Depth mm (inch)</b>	79 (3.11")	79 (3.11")	89 (3.5")	89 (3.5")
<b>Mounting Cutout Diameter mm (inch)</b>	182.4 (7.18")	182.4 (7.18")	243 (9.56")	243 (9.56")
<b>Net Weight Kg (Oz)</b>	613.8 (21.69)	613.8 (21.69)	1215.5 (42.95)	1215.5 (42.95)
<b>Power (RMS/Peak)</b>	125/250 watts	125/250 watts	200/350 watts	200/350 watts

\* Please note specifications are tested with coils in parallel configuration

# PARAMETERS FOR IDQ SHALLOW SERIES WOOFERS

(Due to Constant Improvements, Specifications and Parameters are subject to change without notice.)

	<b>IDQS12D2</b>	<b>IDQS12D4</b>
<b>VC Impedance (ohms)</b>	2Ω + 2Ω	4Ω + 4Ω
<b>Test Impedance (ohms)</b>	1Ω	2Ω
<b>Driver Displacement</b>	0.089	0.089
<b>Fs (Hz)</b>	45	45
<b>SD (sqCM)</b>	522.79	522.79
<b>Vas (Ltr)</b>	25.111	22.401
<b>Cms (M/N)</b>	64.703	59.462
<b>Mms (g)</b>	189.687	192.44
<b>BL™</b>	7.847	10.519
<b>Qms</b>	7.11	7.165
<b>Qes</b>	0.914	0.971
<b>Qts</b>	0.81	0.859
<b>No (%)</b>	0.241%	0.203%
<b>Spl (dB)</b>	86	86
<b>Xmax (mm)</b>	7.5mm	7.5mm
<b>Voice Coil Size (inches)</b>	2.0	2.0
<b>Voice Coil Height mm (inch)</b>	25 (0.98")	25 (0.98")
<b>Voice Coil Type / Former</b>	Kapton	Kapton
<b>Voice Coil Wire</b>	Copper	Copper
<b>DC Resistance (Ohms)</b>	1.04	1.92
<b>Voice Coil Induct @ 1 kHz (MH)</b>	0.43	0.34
<b>Frequency Response (Hz)</b>	45-500Hz	45-500Hz
<b>Resonant Freq. Fs Hz</b>	45	45
<b>HE-Magnetic Gap Height mm (inch)</b>	10 (0.393")	10 (0.393")
<b>Motor Structure (ounces)</b>	62.04 oz	62.04 oz
<b>Mounting Depth mm (inch)</b>	89 (3.5")	89 (3.5")
<b>Mounting Cutout Diameter mm (inch)</b>	276 (10.86")	276 (10.86")
<b>Net Weight Kg (Oz)</b>	1755.6 (62.04)	1755.6 (62.04)
<b>Power (RMS/Peak)</b>	250/450 watts	250/450 watts

\* Please note specifications are tested with coils in parallel configuration

## RECOMMENDED ENCLOSURES

Please note that these enclosure volume recommendations are for the internal airspace inside the enclosure and include the displacement of the subwoofer and ports. When choosing your enclosure type, please pay close attention to your specific woofer, failing to use the correct enclosure may result in lower power handling and poor sound quality. **To calculate the internal airspace required, take the internal dimensions of the box. First multiply these number by themselves and then divide this sum by 1728. (W x H x D) / 1728.**

Please contact your authorized Image Dynamics dealer for other designs and specifications. **(Even though these subwoofers can be used in a ported enclosure, Image Dynamics recommends a sealed enclosure for optimum performance and sound quality)**

### IDQS8

Optimum Sealed Vol	Standard	Metric
Gross Vb Internal	0.333 cu.ft	9.423 Liters
F3 (-3dB Cutoff)	53.04 Hz	53.04 Hz
Qtc	1.096	1.096
Pe (Watts-RMS)	125 Watts	125 Watts
Acceptable Volumes	(0.3 - 0.5 cu. ft)	(8.5 - 14.15 Liters)

### IDQS10

Optimum Sealed Vol	Standard	Metric
Gross Vb Internal	0.486 cu.ft	13.776 Liters
F3 (-3dB Cutoff)	53.56 Hz	53.56 Hz
Qtc	1.052	1.052
Pe (Watts-RMS)	200 Watts	200 Watts
Acceptable Volumes	(0.4 - 0.75 cu. ft)	(11.32 - 21.24 Liters)

### IDQS12

Optimum Sealed Vol	Standard	Metric
Gross Vb Internal	0.713 cu.ft	20.196 Liters
F3 (-3dB Cutoff)	54.93 Hz	54.93 Hz
Qtc	0.942	0.942
Pe (Watts-RMS)	250 Watts	250 Watts
Acceptable Volumes	(0.65 - 1.25 cu. ft)	(18.4 - 35.4 Liters)

# IMAGE DYNAMICS LIMITED WARRANTY POLICY

Image Dynamics USA, Inc. offers limited warranty on Image Dynamics products under normal use on the following terms:

**Image Dynamics Speakers are to be free of defects in material and workmanship for a period of one (1) year.**

This warranty applies only to Image Dynamics products sold to consumers by Authorized Image Dynamics Dealers in the United States of America. Products purchased by consumers from a Image Dynamics dealer in another country are covered only by that country's Distributor and not by Image Dynamics USA.

This warranty covers only the original purchaser of Image Dynamics product. In order to receive service, the purchaser must provide Image Dynamics with the receipt stating the consumer name, dealer, product and date of purchase.

Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at Image Dynamics's discretion and will not be liable for incidental or consequential damages. Image Dynamics will not warranty this product under the following situations:

- **Speakers received with bent frames or water damage**
- **Abuse such as holes in the cone, surround or ripped spider**
- **Voice coil damage due to amplifier clipping or distortion**
- **Product that has not been installed according to this owners manual**

Any implied warranties including warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for Image Dynamics any other liability in connection with the sale of this product.

**Please call (909) 930-1377 for Image Dynamics Customer Service.** You must obtain an RA# (Return Authorization Number) to return any product to Image Dynamics. The RA number must be prominently marked on the outside of the shipping carton or the delivery will be refused. Please pack your return carefully; we are not responsible for items damaged in shipping. Return the defective product along with a copy of the original dated retail sales receipt, plus \$12.00 for handling and diagnostic evaluation to:

**Image Dynamics USA, Inc.,  
Attn: Returns (RA# \_\_\_\_\_)  
2133 S. Green Privado Ontario, CA 91761**

Residents of HI, AK and US territories will be charged for return shipping. All inquires regarding service and warranty should be sent to the above address.

**Removed or altered serial numbers will void this warranty**

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