



DIAMOND
A U D I O

DES_{Series} SUBWOOFER



Owners Manual

DES82/DES84/DES102/DES104/DES122/DES124

About the Diamond Audio Experience:

Congratulations, you have just purchased the finest mobile audio products on the market to date. At Diamond Audio, our products represent the latest advances in acoustic technology in sound reproduction for your vehicle. Diamond Audio products are designed, developed, and engineered using the latest innovative materials and components to provide the finest sound reproduction possible. Every Diamond Audio product has been Klippel verified and tested to ensure the best sounding and most reliable product on the market, if installed properly, Diamond Audio products will provide many years of the ultimate listening experience.

Please note that prolonged exposure to sound pressure levels in excess of 100dB can cause permanent hearing loss. Using Diamond Audio products can exceed that level so please exercise restraint in its operation in order to preserve your ability to enjoy its high fidelity sound for many years to come.

Diamond Audio recommends our products be professionally installed by an authorized Diamond Audio dealer to achieve the best possible system recommendation and installation. This will ensure a true Diamond Audio listening experience and sound you would expect from Diamond Audio products. In doing this you will extend your warranty from one year to two years.

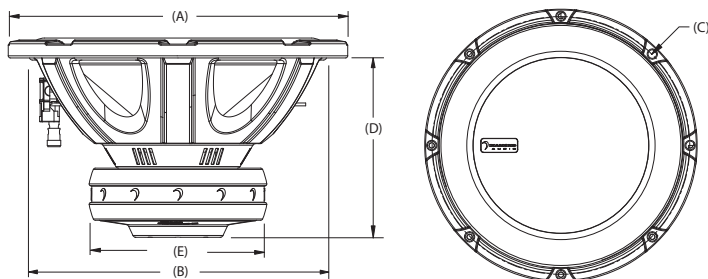
Go ahead, Hear the Music

FEATURES

- True Fiber weave paper backed parabolic cone
- High grade rolled edged 6 leg black powder coat stamped frame
- Oversized chrome push terminals
- Dual mirror image spider with woven tinsel leads
- Black PVC wrap around mounting gasket
- Vented pole and voice coil gap for cooler operation
- Klippel Optimized motor and suspension symmetry

PHYSICAL DIMENSIONS

Dimension	Unit	DES102 / DES104	DES122 / DES124	DES82/DES84
Total Diameter (A)	in. (mm)	10.55 (267.9)	12.57 (319.4)	8.28 (210.4)
Mounting Diameter (B)	in. (mm)	9.17 (233.0)	11.00 (280.6)	7.12 (181)
Hole Diameter (C)	in. (mm)	9.88 (251.0)	11.90 (302.6)	7.67 (195)
Mounting Depth (D)	in. (mm)	5.97 (151.7)	6.63 (168.5)	4.4 (112)
Magnet Diameter (E)	in. (mm)	6.51 (165.2)	6.51 (165.2)	6.1 (155)



THIELE/SMALL PARAMETERS

Parameter (unit)	DES102	DES104	DES122	DES124	DES82	DES84
SPL (dB)	80.6	80.7	82.8	82.8	82.0	82.1
Re (Ω) [series]	3.20	6.30	3.20	6.30	3.40	6.20
Qms	7.50	9.0	8.0	9.0	11.00	11.00
Qes	0.77	0.93	0.83	0.96	0.44	0.51
Qts	0.70	0.84	0.75	0.87	0.42	0.48
Fs (Hz)	35.0	39.5	32.0	34.0	38.0	40.0
Vas (L)	13.0	11.0	31.0	30.0	7.70	8.20
Cms (mm/N)	0.09	0.07	0.09	0.08	0.140	0.150
Mms (g)	240	219	286	263	125.0	105.0
Sd (m ²)	0.0325	0.0325	0.050	0.050	196	196
BL (T*M)	14.8	19.2	14.8	19.3	15.2	18.0
Xmax (mm)	15.7	15.7	15.7	15.7	11.0	10.6
Pwr (W) NOM/MAX	400/800	400/800	500/1000	500/1000	250/500	250/500

ENCLOSURES

The enclosures below are offered as a suggestion only. Assistance from an authorized Diamond Audio retailer is recommended. All volumes are gross internal, driver and vent displacement has been accounted for. The use of a 30hz sub-sonic filter is recommended for the 10" and 12" models. The 8" models are designed to only work and achieve maximum performance and lifetime reliability with the use of a subsonic 30hz filter.

Sealed	DES102	DES104	DES122	DES124	DES82	DES84
Vb (ft ³)	0.45	0.45	0.80	0.80	0.24	0.24
F3 (Hz)/QTC	51 / .60	44 / .70	42 / .70	39 / .81	75/53	68/60
Pe (W)	400	400	500	500	250	250
Vented						
Vb (ft ³)	1.25	1.25	1.75	1.75	0.47	0.47
Fb/F3 (Hz)	36 / 30	36 / 30	32 / 27	32 / 27	44/40	44/40
Port (in.) [dia. x length]	3" x 10"	3" x 10"	3.5" x 12"	3.5" x 12"	2.56" x 20"	2.56" x 20"
Pe (W)	400	400	500	500	250	250

LIMITED SPEAKER WARRANTY STATEMENT

Diamond Audio (a division of CV & DA Holdings, Inc.) warrants this product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase provided it was purchased from an authorized DAT retailer within the United States. However, if this product was installed by the authorized DA retailer, the warranty period will be extended to two (2) years.

THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER OF THIS PRODUCT IN ITS ORIGINAL INSTALLATION. Original purchaser must reside in the United States and be able to provide proof of purchase and installation with the sales receipt from the authorized DAT retailer and completion of online registration that sold and installed the product.

Should a manufacturing defect occur during above said warranty period, DA will replace or repair the defective product with a product of the same or equivalent value and performance.

Damage or failure caused by any of the following is not covered under this warranty policy: negligence, improper use, abuse, product modification, unauthorized repair attempts, accident, acts of God, misrepresentations by DA retailers, and improper/inadequate packaging during return shipping.

Warranty is void if serial numbers have been removed, altered or defaced.

HOW TO OBTAIN WARRANTY SERVICE

In the event a DA product should require service, you should visit the authorized DA retailer you purchased the product from and they can expedite your claim. All claims must fall into the guidelines listed above and be accompanied by a copy of the original sales and installation receipt from that authorized DA retailer.

Product returned for warranty service must be freight-prepaid, properly packaged and clearly marked with the Return Authorization (RA) number issued by DA. Any product returned to DAT that is improperly packaged, does not have a RA number clearly marked on the package, or never received a RA number may be refused upon delivery. DA does not assume responsibility for lost or misdirected product.

Repair or replacement under this warranty is the exclusive remedy of the consumer. DA shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty on this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights that may vary from state to state.

Customers outside the United States should contact their local sales office to obtain information on pricing, exchange unit availability, instructions, service and warranty/non-warranty replacement or repair.



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