

OWNER'S MANUAL



M81B5

Marine Subwoofer

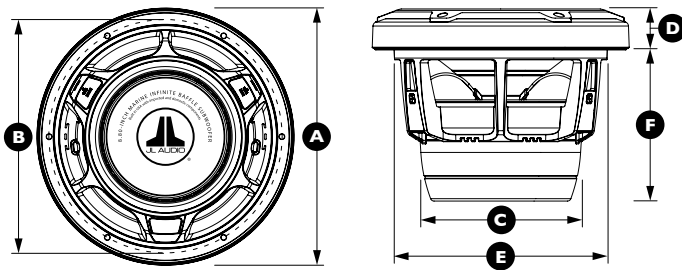
Thank you for choosing a JL Audio Marine Subwoofer.

*With proper installation, your new speaker
will deliver years of listening pleasure.*

*We strongly recommend that you have your subwoofer installed
by your authorized JL Audio dealer. The installation
professionals employed by your dealer have the necessary tools and experience to
properly install this product. If you prefer to perform
your own installation, please read this instruction manual
completely before beginning the process.*

JL AUDIO®
Ahead of the Curve™

PHYSICAL SPECIFICATIONS



Subwoofer Physical Specifications	
Nominal Diameter:	8 in / 200 mm
Frame Outer Diameter (A):	8.80 in / 224 mm
Bolt Hole Circle (B):	7.97 in / 202 mm
Motor Overmold Outer Diameter (C):	5.50 in / 140 mm
Frontal Grille Protrusion* (D):	1.45 in / 37 mm
Mounting Hole Diameter (E):	7.375 in / 187 mm
Mounting Depth (F):	5.18 in / 132 mm
Net Weight:	6.82 lbs. / 3.094 Kg
Driver Displacement:	0.032 ft³ / 0.91 litres

* Frontal grille protrusion measured from mounting surface.

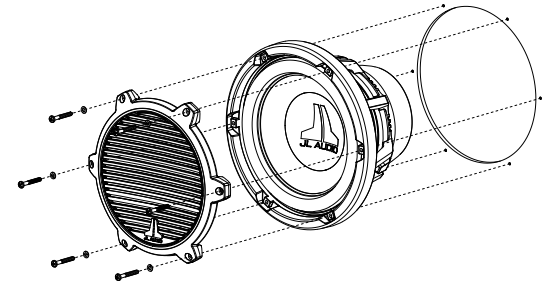
Subwoofer Parameters	M8IB5
Free Air Resonance (Fs):	53.37 Hz
Electrical "Q" (Qes):	0.833
Mechanical "Q" (Qms):	11.827
Total Speaker "Q" (Qts):	0.778
Equivalent Compliance (Vas):	0.57 ft³ / 16.00 litres
One-way, Linear Excursion (Xmax)*:	0.53 in / 13.5 mm
Efficiency (1W/1m)**:	86.7 dB SPL
Effective Piston Area (Sd):	35.15 in² / 0.0227 m²
DC Resistance (Re):	2.958 ohm
Nominal Impedance:	4 ohm
Infinite Baffle Use:	Yes
Enclosure Use:	Yes (Sealed & Ported)
Power Handling (continuous):	200W

* Xmax specifications are derived via one-way voice coil overhang method with no correction factors applied.
 ** Efficiency (1W/1m) is not an accurate indicator of a subwoofer's output capability and should not be used as a comparison to other subwoofers to determine which one is "louder"!

We recommend the use of this speaker in a bi-amplified system using high-quality satellite speakers and amplifiers. We do not recommend the use of this subwoofer with a passive crossover (coil), as this type of device will adversely affect performance.

INCLUDED PARTS

- One Polymer Subwoofer Grille
- Six #8 x 1 3/8-inch (35 mm) Phillips pan-head stainless-steel screws
- Six #8 stainless-steel washers
- Logo Badges (Sport-Grille Models Only)
 - One Pair Black (White & Titanium/Black Models)
 - One Pair Red (White & Titanium/Black Models)
 - One Pair White (White Models Only)
 - One Pair Titanium (Titanium/Black Models Only)



INSTALLATION PROCEDURE

The diagram above shows the typical installation procedure into a fiberglass panel using the supplied hardware (Classic Grille Model shown. Installation is the same for Sport Grille Models). Always follow proper safety procedures when working on a vessel. Use eye-protection at all times and a dust mask and gloves when cutting.

- 1) Choose a flat mounting surface that has sufficient depth and air space behind it to accept the subwoofer.
- 2) Cut a 7.375-inch (187 mm) diameter hole.
- 3) Run the speaker cable to the mounting location.
- 4) Place the woofer in the hole and mark the screw hole locations using a sharp, pointed tool.
- 5) Remove the woofer and drill a pilot hole (see chart on next page) in each of the screw locations. It is also advisable to use a hand-driven countersink tool on each hole to further inhibit gel-coat cracking of fiberglass panels.
- 6) Connect the speaker wires and place the woofer, with its grille in place, into the opening (for Sport Grille models, pay attention to where the logo badge will added).
- 7) While holding the speaker firmly in its mounting location, evenly snug the mounting screws in a criss-cross pattern, then hand tighten in a criss-cross pattern.

Non-standard installations may require different hardware. Always use marine-grade, stainless-steel fasteners to ensure a secure, reliable installation.



CAUTION



While this speaker is designed to be water and spray resistant, it is not designed to be submerged or to withstand high-pressure water spray. Please exercise care when washing your boat to avoid damaging your speaker. Do not install on submersibles, personal watercraft or any other vessel likely to be under water at any time.

Prolonged exposure to sound pressure levels in excess of 100dB can cause permanent hearing loss. This high-performance speaker can exceed this level. Please exercise restraint in its operation in order to preserve your ability to enjoy its fidelity.

When installing a subwoofer in your vessel, it is extremely important to secure it firmly. This applies not only to the woofer itself, but also the structure it is mounted to. If not firmly attached, the speaker can become a dangerous projectile in a collision. Please review the mounting information carefully and use the supplied marine-grade hardware to mount this product.

NOTE: The enclosure recommendations listed are external dimensions which assume the use of 3/4" (19mm) thick material. If you are using 5/8" (16mm) thick material, subtract 1/4" (6.5mm) from each dimension. Do not use any material with a thickness of less than 5/8" (16mm) as this may compromise the rigidity of the enclosure.

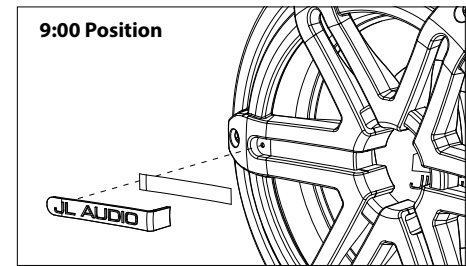
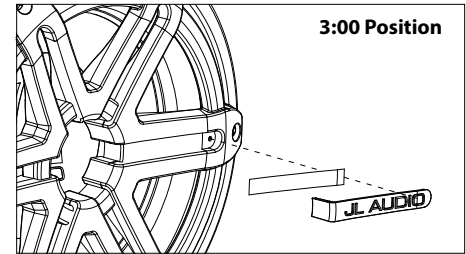
NOTE: All enclosure volumes listed are net internal volumes! Box volume displacement, port displacement and brace displacement must be added to obtain the final gross internal volume. All enclosure dimensions listed have already taken this into account.

INTERCHANGEABLE LOGO BADGE (Sport-Grille Models Only)

Interchangeable Logo Badges for Sport Grille model subwoofers are included to further customize your installation. The design of the Sport Grille allows for the JL Audio logo to be added in your choice of included colors and oriented in the manner that best suits your installation.

NOTE: A left and a right badge of each color is included. These two different orientations ensure the "JL Audio" Logo will read correctly wherever positioned (most commonly the 3:00 or 9:00 position).

Remove the adhesive backing from the badge and affix the badge to the grille using the small positioning hole as a guide. See diagram at right.

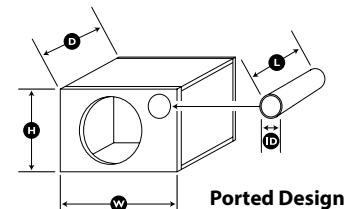
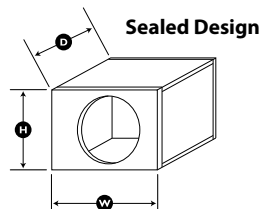


#8 SCREW: PILOT HOLE RECOMMENDATIONS

Fiberglass Thickness	Recommended Pilot Hole Drill Size
0.125 in (3.18 mm) or less	7/64 in (2.78 mm) pilot hole
foam core / fiberglass sandwich	7/64 in (2.78 mm) pilot hole
larger than 0.125 in (3.18 mm)	1/8 in (3.18 mm) pilot hole

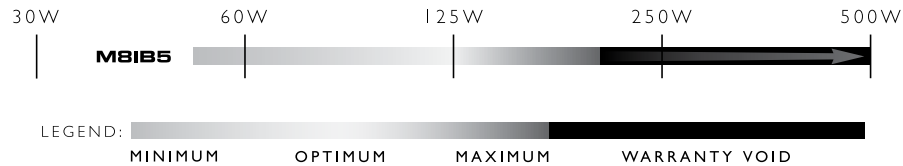
ENCLOSURE SPECIFICATIONS

Recommended Sealed Design				
Volume (net int.)	External Dimensions (Width x Height x Depth)	F3 (Hz)	Fc (Hz)	Qtc
1.50 ft ³ 42.5 litres	16 in x 14 in x 16.125 in 406 mm x 457 mm x 410 mm	51.53	62.62	0.9128



Recommended Ported Design				
Volume (net int.)	Enclosure External Dimensions (Width x Height x Depth)	Round Port Specs (Inner Diameter x Length)	Tune to: (Hz)	F3 (Hz)
1.50 ft ³ 42.5 litres	16 in x 14 in x 17.125 in 406 mm x 457 mm x 435 mm	4 in x 12 in 102 mm x 305 mm	39	29.53

RECOMMENDED CONTINUOUS (RMS) POWER RANGE FOR ONE SUBWOOFER DRIVER:



MEDIUM GRAY (MINIMUM):

From a reliability standpoint, this zone represents a very comfortable operating power range for each driver. This level of power will not stress the woofer but will not extract all of its performance potential, either.

Use of less than the minimum power level will not damage the woofer, but may result in unsatisfactory performance.

LIGHT GRAY (OPTIMUM):

This zone represents the best compromise between long-term reliability, high-output and low-distortion performance. This power level is lower than the woofer's continuous power rating (as published in its specifications), but you will still be taking advantage of the woofer's, low-distortion performance range without undue risk of failure.

DARK GRAY (MAXIMUM):

Slightly more SPL will be gained by pushing the power into this zone, but typically not more than 2dB, compared to the light gray zone. The subwoofer driver is designed to operate safely up to this power range, but not beyond. Operate with caution.

BLACK (WARRANTY VOID):

We do not recommend operating woofers at this level of power. In this zone, there is a very high probability that the driver will fail due to excessive heat and/or mechanical stress.

Subwoofer drivers operated at these levels of power are NOT covered under warranty.

When designing systems with our drivers, it is very important to achieve a good power match between the subwoofer amplifier and the subwoofer driver's capabilities. The power levels listed in the above chart represent continuous (RMS) amplifier power per woofer and assume that the user will regularly make full use of that power without drastically overdriving the amplifier(s). Make sure you factor system impedance and the total number of subwoofers into your calculations. Adhering to these power recommendations will result in systems that are both reliable and enjoyable.

JL AUDIO LIMITED WARRANTY (USA)

Marine Subwoofer Components

JL AUDIO warrants this speaker to be free of defects in materials and workmanship for a period of **two (2) years** from the original date of purchase.

Damage caused by the following is not covered under warranty: accident, misuse, abuse, product modification or neglect, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages and does not cover the cost of removing or reinstalling the unit(s). Cosmetic damage due to accident or normal wear and tear is not covered under warranty.

This warranty is not transferable and applies only to the original purchaser of the product from an authorized JL AUDIO dealer. Warranty is voided if the factory-applied product serial number is removed or defaced.

Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, JL AUDIO will, at its discretion, repair or replace the defective product with new or remanufactured product at no charge.

Any applicable implied warranties are limited in duration to the period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether express or implied, shall apply to this product thereafter. Some states do not allow limitations on implied warranties, therefore these exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If you need service on your JL AUDIO product:

All warranty returns should be sent to JL AUDIO freight prepaid through an authorized JL AUDIO dealer and must be accompanied by proof of purchase (a copy of the original sales receipt.) Direct returns from consumers or non-authorized dealers will be refused unless specifically authorized by JL AUDIO with a valid return authorization number. Warranty expiration on products returned without proof of purchase will be determined from the manufacturing date code. Coverage may be invalidated as this date is previous to purchase date. Return only defective components. Non-defective items received will be returned freight-collect. Customer is responsible for shipping charges and insurance in sending the product to JL AUDIO. Freight damage on returns is not covered under warranty. Always include proof of purchase (sales receipt).

For Service Information in the U.S.A. please call:

JL Audio customer service: (954) 443-1100 during normal business hours (Eastern Time)

JL Audio, Inc

10369 North Commerce Parkway, Miramar, FL 33025

International Warranties:

Products purchased outside the United States of America are covered only by that country's distributor and not by JL Audio, Inc.