

GARMIN®

JL AUDIO® M6-8IB

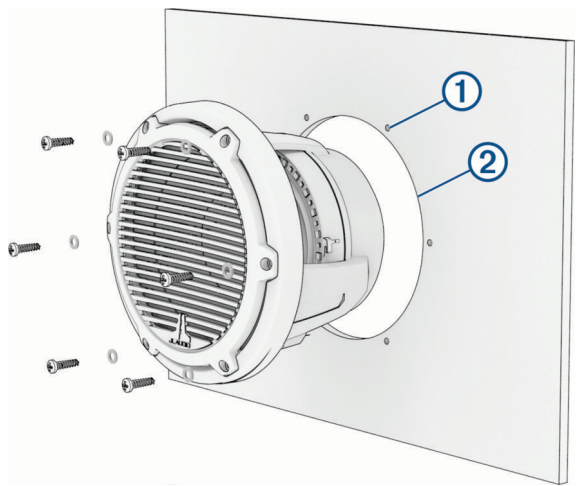


Installation
Instructions

Table of Contents

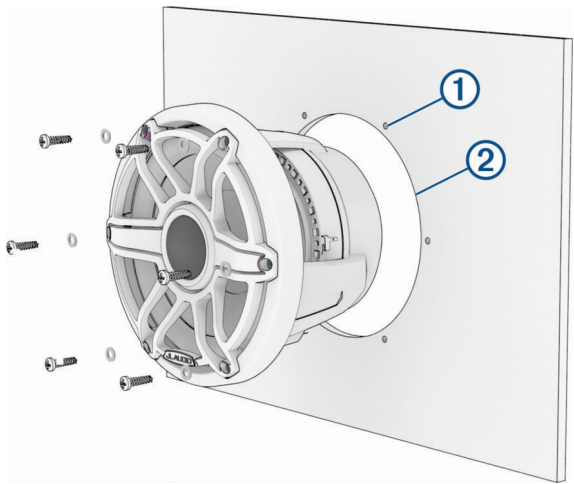
Classic Model Installation.....	3
Sport Model Installation.....	4
Speaker Connections.....	5
LED Fuse Ratings.....	6
Dimensions.....	7
Installation and Use Warnings.....	0
Installation Caution.....	9
Installation Notices.....	10
LED Wiring.....	11
LED Fuse Installation.....	11
Connecting the LED Wires Directly to Power.....	11
Enclosure Applications.....	12
Recommended Sealed Enclosure Specifications.....	12
Recommended Ported Enclosure Specifications.....	12
Specifications.....	13
Parameters.....	13

Classic Model Installation



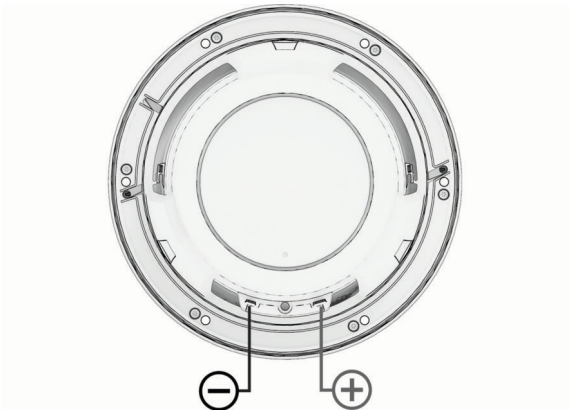
①	2.78 mm (⁷ / ₆₄ in.)
②	Ø: 187 mm (7.375 in.)

Sport Model Installation



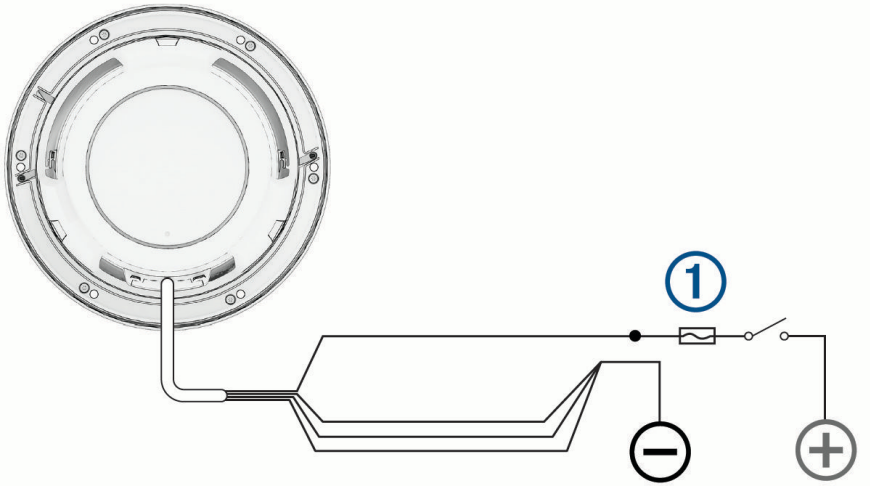
①	2.78 mm (⁷ / ₆₄ in.)
②	Ø: 187 mm (7.375 in.)

Speaker Connections



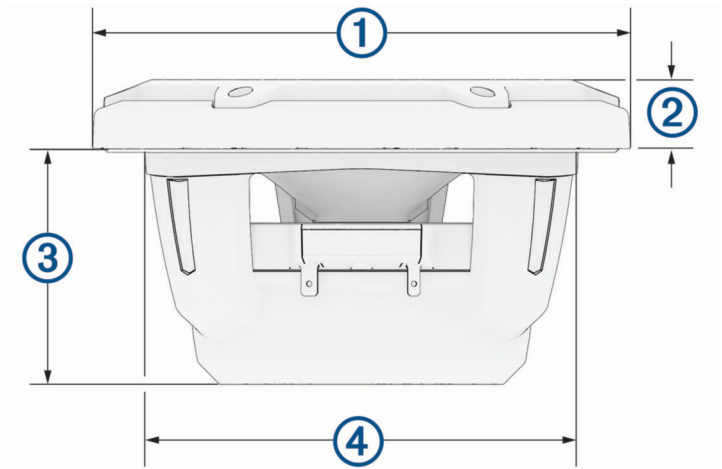
⊕	6.35 mm (0.25 in.)
⊖	4.75 mm (0.187 in.)

LED Fuse Ratings



①	750 mA
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Dimensions



①	224 mm (8.80 in.)
②	Classic: 35 mm (1.37 in.) Sport: 37 mm (1.45 in.)
③	127 mm (5.00 in.)
④	187 mm (7.375 in.)

 WARNING

See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

You must install this device securely according to these instructions. Failure to install this device in accordance with these instructions could result in serious personal injury, damage to the device and/or vessel, or poor product performance.

To avoid possible serious personal injury or damage to the device and the vessel, you must disconnect the power supply to the vessel's audio system before beginning to install the device.

The front of the speaker is protected from water ingress. The rear of the speaker, including all connected components and wires, is not waterproof and must be protected against moisture exposure. Moisture exposure to the rear of the speaker can lead to speaker component failure which can cause a fire resulting in property damage, serious personal injury, or death.

Continuous exposure to sound pressure levels over 100 dBA may cause permanent hearing loss. The volume is typically too loud if you cannot hear people speaking around you. Limit the amount of time you listen at high volume. If you experience ringing in your ears or muffled speech, stop listening and have your hearing checked.

The product contains magnets that may interfere with medical devices. Consult your physician and medical device manufacturer with questions.

Installation Caution

CAUTION

To avoid possible personal injury, always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding.

Installation Notices

NOTICE

The product contains magnets that may cause damage to some electronic devices. Use caution using the product near electronic devices.

When drilling or cutting, always check what is on the opposite side of the surface to avoid damaging the vessel.

It is strongly recommended that you have your audio system installed by a professional installer to ensure optimum performance.

When mounting the speaker in an area exposed to weather or water, you must mount the speaker on a vertical surface. If you mount the speaker on a horizontal surface facing up, water can gather in and around the speaker, causing damage over time.

If you intend to mount the speakers outside the boat, you must mount them in a location well above the waterline, where they are not submerged or damaged by docks, pilings, or other pieces of equipment. When mounted correctly, these speakers are rated for protection from the front of the speaker. Water exposure and damage to the rear of the speaker voids the warranty. This includes situations when the speakers are mounted in an enclosure, especially if they are exposed to wash down. Using an enclosure with a port or vent exposed to the outside environment may allow water to collect and damage the speaker.

You must turn off the audio system before making any connections to the source unit, amplifier, or speakers. Failure to do so could result in permanent damage to the audio system.

You should protect all terminals and connections from grounding and from each other. Failure to do so could result in permanent damage to the audio system and void the product warranty.

LED Wiring

NOTICE

Using certain LED colors on the speakers, such as red and green, may violate the laws, regulations, and standards related to the use and/or operation of marine navigation lights. It is the user's responsibility to comply with any such applicable laws, regulations, and standards. Garmin® is not responsible for any fines, penalties, citations, or damages that may be incurred due to any such lack of compliance.

NOTE: LEDs are not available on all models.

LED Fuse Installation

⚠ WARNING

You must install an inline fast-blow fuse on the positive wire at the power-source end of the LED cable for each speaker to protect the LEDs and the speaker from excessive electrical current. Failure to install a fuse could cause a fire resulting in property damage, serious personal injury, or death.

- The fuse must be installed in a fuse holder intended for marine use.
- The fuse must be installed on the positive wire on the power-source end of the LED cable.
- The fuse must be installed for use with any power source, including a lighting controller.
- Always use a fuse of the correct amperage rating and type for your speaker model.

Model	Fuse Amperage
M6-8IB	750 mA

Connecting the LED Wires Directly to Power

If you choose not to install a remote control to turn the LEDs on and off, change the color, and create lighting effects, you can choose a static LED color by connecting specific LED color wires to negative ground (-). You can splice the LED ground wire or a combination of ground wires to customize the LED output color beyond red, green, or blue.

You must connect all 12 Vdc wiring for the LEDs to a fuse at the power-source end of the cable. You should connect the LED yellow positive (+) power wire to a 12 Vdc power source through an isolator switch or circuit breaker to turn the LEDs on and off. You can use the same isolator or circuit breaker controlling the power supply to your stereo, which allows you to turn the LEDs and the stereo on and off at the same time. The fuse must be installed between the LED cable and the isolator switch or circuit breaker.

You should use 20 AWG (0.5 through .75 mm²) or thicker wire to connect the LEDs to the power source.

- 1 Route the positive power (+) and negative ground (-) wires from the LED connections to the 12 Vdc power source.
- 2 Connect the LED ground wire or the combination of ground wires, according to the preferred LED color, to negative ground (-).

LED Color	LED Wire Color
Red	Red wire
Green	Green wire
Blue	Blue wire
Yellow	Combined red and green wires
Magenta	Combined red and blue wires
Cyan	Combined blue and green wires
White	Combined red, green, and blue wires

- 3 Connect the yellow positive (+) wire of the LED cable to the positive (+) 12 Vdc power source through the appropriate fuse ([LED Fuse Installation, page 11](#)) and an isolator switch or circuit breaker.

Enclosure Applications

This subwoofer is designed for infinite-baffle operation using a large volume of air behind it (56.6 L/2.00 ft.³ or greater), without a dedicated enclosure. For best performance, the compartment or area behind the mounting location must remain empty. If you decide to build a dedicated enclosure, refer to a recommended design below.

Recommended Sealed Enclosure Specifications

Volume (Net internal)	56.66 L (2.00 ft. ³)
-3 dB cutoff frequency (F_3)	51.78 Hz
System resonance (F_c)	61.89 Hz
System Q at resonance (Q_{tc})	0.8869

NOTE: The enclosure volume listed is the net internal volume only. Net volume and brace displacement must be added to obtain the final gross internal volume.

Recommended Ported Enclosure Specifications

Volume (Net internal)	42.5 L (1.50 ft. ³)
Round port inner diameter	102 mm (4 in.)
Round port length	343 mm (13.50 in.)
-3 dB cutoff frequency (F_3)	31.26 Hz
Box tuning frequency (F_b)	37 Hz

NOTE: The enclosure volume listed is the net internal volume only. Net volume, port, and brace displacement must be added to obtain the final gross internal volume.

Specifications

RMS power	200 W
Recommended amplifier power (RMS)	From 50 to 200 W per channel
One-way linear excursion ($X_{\max}$)	13.5 mm (0.53 in.)
Efficiency (1 W/1 m)	86.8 dB
Nominal impedance	4 ohms
LED supply voltage (LED Sport models only)	From 10 to 14.4 Vdc
LED load current (at 14.4 Vdc)	486 mA

Parameters

Free-air resonance (F_s)	54.92 Hz
Electrical Q (Q_{es})	0.852
Mechanical Q (Q_{ms})	10.314
Total Q factor (Q_{ts})	0.787
Equivalent compliance volume (V_{as})	15.29 L (0.54 ft. ³)
Effective diaphragm area (S_d)	0.0227 m ² (35.15 in. ²)
DC Resistance (R_e)	2.993 ohms
Displacement	0.93 L (0.033 ft. ³)
Net weight	3.9 kg (8.7 lb.)

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