

# OWNER'S MANUAL

## C1-690x

6 x 9-inch (150 x 230 mm) Coaxial Loudspeakers

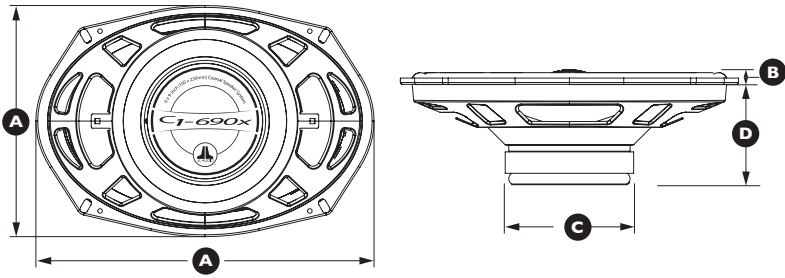
*Thank you for choosing JL Audio loudspeakers for  
your automotive sound system.*

*We strongly recommend that you have your new loudspeakers installed by  
an authorized JL Audio dealer. Your authorized dealer has the training,  
expertise and installation equipment to ensure  
optimum performance of these loudspeakers in your vehicle.*

*If you decide to install the loudspeakers yourself, please read this manual  
thoroughly to familiarize yourself with their installation  
requirements and setup procedures.*

*Should you have any questions regarding the instructions in this manual,  
please contact your authorized JL Audio dealer for assistance, or call the  
JL Audio Technical Support Department at (954) 443-1100  
during business hours (USA - Eastern Time Zone).*





#### Coaxial Physical Dimensions

<b>Frame Outer Diameter (A)</b>	6.38 x 9.33 in. / 162 x 237 mm
<b>Tweeter Protrusion (B)</b>	0.41 in. / 10 mm
<b>Motor Outer Diameter (C)</b>	3.54 in. / 90 mm
<b>Mounting Depth (D)</b>	2.75 in. / 70 mm

Due to ongoing product development, all specifications are subject to change without notice.

## C1-690x SPECIFICATIONS:

**Continuous Power Handling:** 60 Watts

**Recommended Amp Power:** 10-100 Watts per channel (RMS)

**Efficiency:** 91.5 dB @ 1W / 1m | 97.5 dB @ 1W / 0.5m

**Sensitivity:** 94.0 dB @ 2.83V / 1m

**Nominal Impedance:** 4 ohm

**Frequency Response:** 39 Hz - 22 kHz  $\pm$  3 dB

### Woofers:

Injection-molded, mineral-filled, polypropylene cone

Rubber, positive roll surround

1.2 in. (30 mm) diameter voice coil

Flat, Conex® spider with integrated lead wires

Ferrite Magnet

### Tweeter:

Edge-driven, silk-suspended aluminum dome

1.0 in. (25 mm) diameter diaphragm / voice coil

Ferrofluid cooling / damping

Neodymium magnet

### Crossover:

Natural roll-off, low-pass

2nd order, high-pass filter with inductor and

electrolytic capacitor

### Included Components and Parts:

- Two (2) C1-690x 6 x 9-inch (150 x 230 mm) coaxial loudspeakers
- Eight (8) #8 x 1.50-inch (38 mm) sheet metal screws
- Eight (8) mounting clips
- Two (2) 4.7 mm female crimpable connectors
- Two (2) 2.8 mm female crimpable connectors
- Two (2) bottom-mount spacer adaptor rings

## GETTING STARTED

- Turn off the audio system. It is also advisable to disconnect the negative (-) terminal of your vehicle's battery whenever performing installation work.
- Before cutting, drilling or inserting any screw, check clearances on both sides of the planned mounting surface. Also check for any potential obstacles, such as window tracks and motors, wiring harnesses, etc. Check both sides of the vehicle, many vehicles are not symmetrical!
- Always wear protective eyewear.

## SPEAKER PLACEMENT CONSIDERATIONS

Grilles are not included with C1 speakers, as they are designed for installation into OEM (factory) speaker locations, located behind factory grilles. Should you need grilles, you will need to purchase aftermarket grilles separately.

### **!! WARNING**

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

## INSTALLATION OVERVIEW

C1 speakers are designed for installation into OEM speaker locations, mounted behind factory panels/grilles. Depending on the equipment used or design of your audio system, you may use the factory speaker wires or run new speaker wires to each speaker location. You will also need to run new speaker wires if you elect to mount your speakers in custom locations. Select the wiring method that is appropriate for your audio system and equipment. If you are unsure about this or any steps in the installation process, please contact your JL Audio dealer for installation help

### Speaker Wiring:

If you will be using the factory speaker wires, it may be necessary to change the terminations. This may be accomplished by using an adaptor plug or simply by cutting the factory connector off and using the supplied crimp connectors to terminate the speaker wires. The larger connector is for the positive terminal and the smaller connector is for the negative terminal of each C1-690x.

If you choose to run new speaker wires, protect all wiring from sharp edges by carefully routing them, securing them and using grommets and loom where appropriate. If you are running wires into a door, use existing factory wiring boots whenever possible. If you are drilling new holes, file their edges and install rubber grommets into each hole. Wires running into car doors should be covered with a protective, flexible PVC sleeve. Make sure that the wires will clear door hinges and other structures in the door.

### **!! WARNING**

**Double check the clearance for both speakers before proceeding. Many cars are different from one side to the other!**

### Speaker Installation in Factory Locations:

Your new speakers have been designed to install, without modifications, into many vehicles with OEM speaker locations that accept a 6 x 9-inch (150 x 230 mm) speaker. Many factory 6 x 9-inch speakers use four mounting screws, which will line up with the mounting holes on your C1-690x speakers.

Spacer adaptor rings are included to fit, bottom-mount applications. Each spacer ring can be placed on the front of the mounting flange, in between the speaker and mounting panel, as shown in Diagram A (page 5).

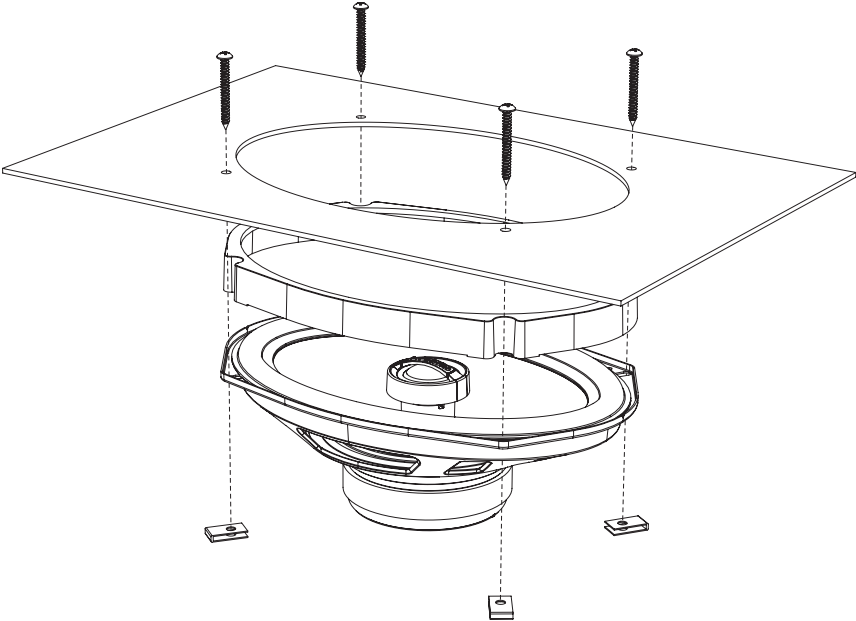
It is absolutely vital that the speaker frame fits into the mounting hole cleanly. This must be checked prior to tightening the screws. Never force the frame into a hole that is too small, and do not attempt to tighten the speaker onto an uneven surface. This will damage your speakers.

The speaker should fit so that air does not leak around the mounting flange. Air leaks will cause a severe degradation in sound quality. Seal any air leaks with an automotive-grade sealant material.

### **!! WARNING**

**Hand-tighten the screws evenly in a criss-cross pattern to avoid bending the speaker frame or stripping the mounting screws.**

**DIAGRAM A:**  
**Speaker Installation with Spacer Ring**



**NOTES**



## LIMITED WARRANTY - AUTOMOTIVE SPEAKER SYSTEMS (USA)

JL AUDIO warrants these speakers (and crossover networks, where applicable) to be free of defects in materials and workmanship for a period of **one (1) year**.

This warranty is not transferable and applies only to the original purchaser from an authorized JL AUDIO dealer. 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. 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.

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. If one speaker fails in a system, return only that speaker component, not the entire system. 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.

### **For Service Information in the U.S.A. please call**

**JL Audio Customer Service:** (954) 443-1100

9:00 AM – 5:30 PM (Eastern Time Zone)

### **JL Audio, Inc**

10369 North Commerce Pkwy.

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.