

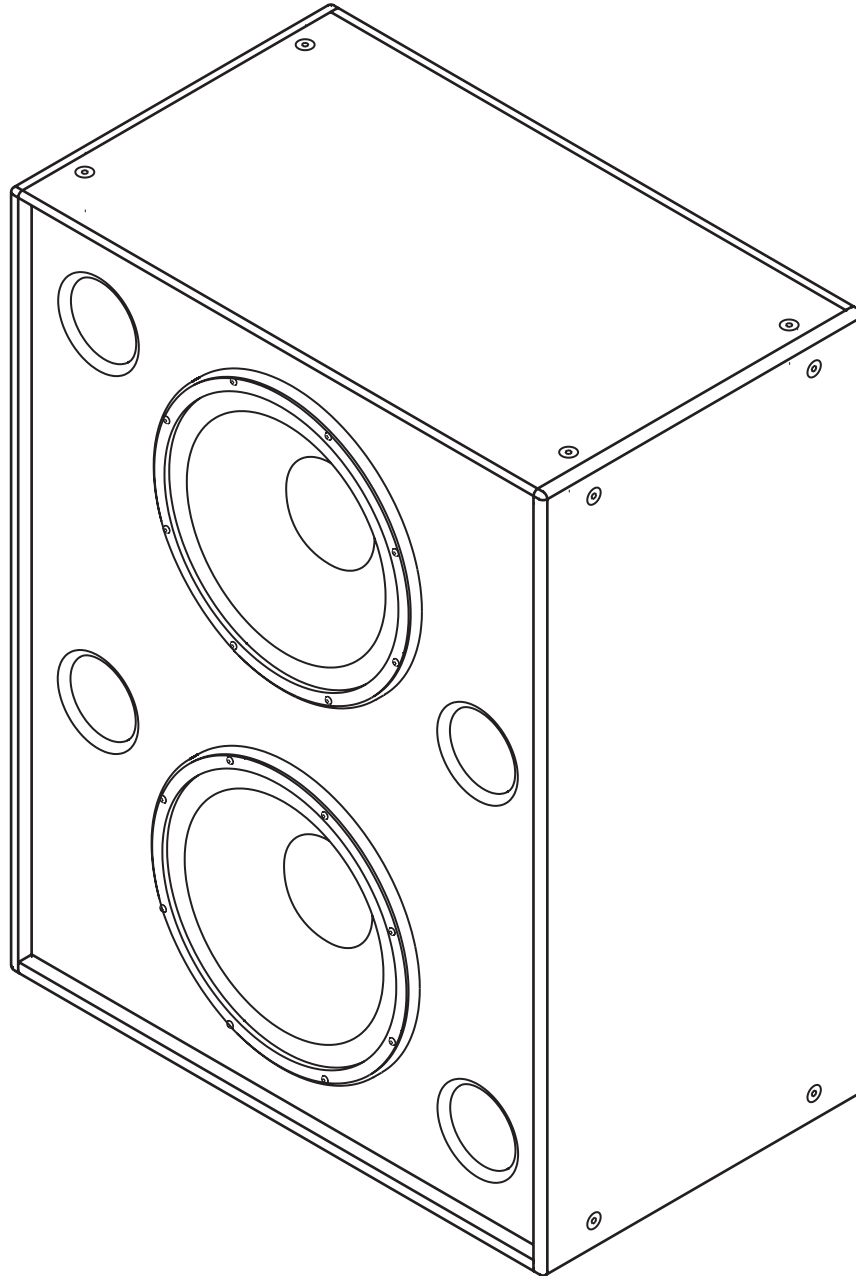
LF-4215-(8)F



Cinema Loudspeaker User Manual

LF4215-F – Dual 15" Flyable Cinema Woofer – 4 Ohms

LF4215-8F – Dual 15" Flyable Cinema Woofer – 8 Ohms



TD-000295-00-B



EXPLANATION OF SYMBOLS

The term “**WARNING!**” indicates instructions regarding personal safety. If the instructions are not followed the result may be bodily injury or death.

The term “**CAUTION!**” indicates instructions regarding possible damage to physical equipment. If these instructions are not followed, it may result in damage to the equipment that may not be covered under the warranty.

The term “**IMPORTANT!**” indicates instructions or information that are vital to the successful completion of the procedure.

The term “**NOTE**” is used to indicate additional useful information.



The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The intent of the exclamation point within an equilateral triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.



IMPORTANT SAFETY INSTRUCTIONS



WARNING! Before placing, installing, rigging, or suspending any speaker product, inspect all hardware, suspension, cabinets, transducers, brackets and associated equipment for damage. Any missing, corroded, deformed, or non-load rated component could significantly reduce the strength of the installation or placement. Any such condition severely reduces the safety of the installation and should be immediately corrected. Use only hardware which is rated for the loading conditions of the installation and any possible short-term, unexpected overloading.



WARNING! Never exceed the rating of the hardware or equipment.



WARNING! Consult a licensed, professional engineer regarding physical equipment installation. Ensure that all local, state and national regulations regarding the safety and operation of loudspeakers and related equipment are understood and adhered to. This product is capable of producing sound pressure levels that can permanently damage human hearing. Always keep sound pressure levels in the listening area below levels that can damage human hearing.

Warranty (USA only; other countries, see your dealer or distributor)

QSC Audio Products 3 Year Limited Warranty

QSC Audio Products, LLC (“QSC”) guarantees its products to be free from defective material and/or workmanship and will replace defective parts and repair malfunctioning products under this warranty when the defect occurs under normal installation and use, provided the unit is returned to our factory, one of our authorized service stations or an authorized QSC International Distributor via pre-paid transportation with a copy of proof of purchase (i.e., sales receipt). This warranty provides that the examination of the return product must indicate, in our judgment, a manufacturing defect. This warranty does not extend to any product which has been subjected to misuse, neglect, accident, improper installation, or where the date code has been removed or defaced. QSC shall not be liable for incidental and/or consequential damages. This warranty gives you specific legal rights. This limited warranty is freely transferable during the term of the warranty period. The warranty on QSC products is NOT VALID if the products have been purchased from an unauthorized dealer/online e-tailer, or if the original factory serial number has been removed, defaced, or replaced in any way. Damage to, or loss of any software or data residing on the product is not covered. When providing repair or replacement service, QSC will use reasonable efforts to reinstall the product's original software configuration and subsequent update releases, but will not provide any recovery or transfer of software or data contained on the serviced unit not originally included in the product.

Customers may have additional rights, which vary from state to state or from country to country. In the event that a provision of this limited warranty is void, prohibited or superseded by local laws, the remaining provisions shall remain in effect.

The QSC limited warranty is valid for a period of three (3) years from date of purchase in the United States and many (but not all) other countries.

For QSC warranty information in countries other than the United States, contact your authorized QSC international distributor. A list of QSC International distributors is available at www.qscaudio.com.

To register your QSC product online, go to www.qscaudio.com and select “Product Registration”. Other questions regarding this warranty can be answered by calling, e-mailing or contacting your authorized QSC distributor.

Phone: 1-800-854-4079 within US and Canada, +1-714-754-6175 international, **Email:** warranty@qscaudio.com, **Website:** www.qscaudio.com.

Introduction

The LF-4215-F and the LF-4215-8F dual 15" (381 mm) low-frequency enclosures are designed specifically for large format cinema applications. Meeting cinema requirements for extended low-frequency response differentiates these products from more conventional "rock-and-roll" woofer systems. The LF-4215-F and LF-4215-8F cover the frequency range from 35 Hertz to 1000 Hertz, depending upon the high-frequency system requirements.

The LF-4215-8F is an 8 ohm version of the 4 ohm LF-4215-F. Both are designed for safe and easy suspension via M10 fly points. Heavily braced, tour grade construction provides great strength while keeping weight to a minimum.

The two custom 400 watt, 15" transducers were developed especially for cinema use. They feature extremely large 4" (100 mm) voice coils and a multi-vented pole piece to ensure cool operation, even at high power levels. Cooler temperatures increase transducer lifespan and decrease the problem of power compression at high power. An undercut pole piece ensures the voice coil operates in a Symmetrical Magnetic Gap (SMG), reducing second harmonic distortion.

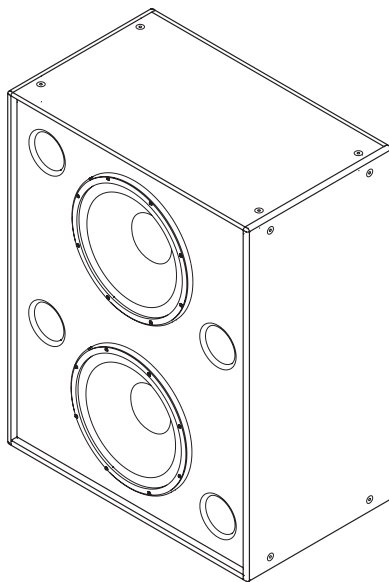
The enclosure features Single Woofer Chambers (SWC), separate chambers for each transducer. In the rare event of a transducer failure, this prevents over-excursion of the remaining transducer caused by improper box loading. Large, Fully Radiused Ports (FRP) ensure smooth air flow through the ports, especially at higher power. This prevents potentially audible port turbulence noise. Both internal and external port openings are fully radiused.

With Symmetrical Port Loading (SPL), bass ports are evenly spaced on each side of the transducers, making internal pressure more uniform across the back surface of the transducer. This prevents the cone from being displaced to one side or another by unbalanced forces, reducing the chance of driving the voice coil out of the center of the gap at high power.

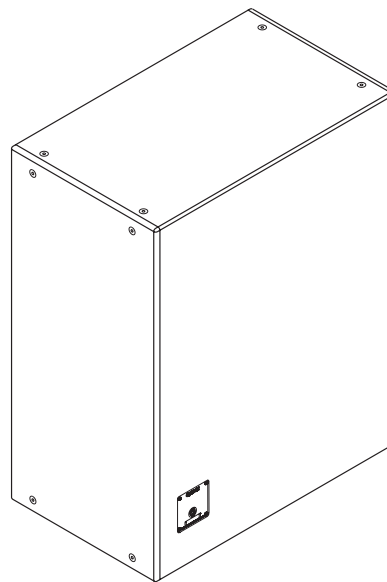
Sixteen M10 mounting points provide safe and secure means to suspend the enclosure via M10 forged eyebolts (not included) or user-supplied brackets. Always consult a licensed structural engineer to approve any mounting method.

Features

- "Flyable" dual-woofer screen channel speaker system
- Constructed of heavily braced, 15 mm tour-grade plywood
- Sixteen M10 fly points per enclosure for safe and easy suspension
- Common dimensions of Mid/Hi and LF enclosures facilitate easy installation in vertical or horizontal arrays



– Figure 1 –



– Figure 2 –

Suspension

The LF-4215-F and the LF-4215-8F enclosures feature 16 load-rated attachment points. As shipped from the factory, each attachment point has a bolt installed to retain the air-tight design of the enclosure. Never operate the loudspeaker with the attachment points open (unsealed) as it will degrade the performance of the product.

The LF-4215-F, LF-4215-8F, MH-1075C-F and MHV-1090F have the exact same external dimensions and attachment points. They can be supported individually or as a group, depending on what works best for the application. The boxes can be arrayed vertically and horizontally. When paired together, it is recommended that the mounting structure connects both boxes to the suspension system rather than suspending the boxes from one another. Commercially available uni-strut or other custom fabricated brackets can be used.

Suspending the system from the top rear attachment points results in a slight down angle that may be close to the desired aiming for many installations. The bottom attachment points can be used for a pull-back cable to fine tune the tilt of the system.

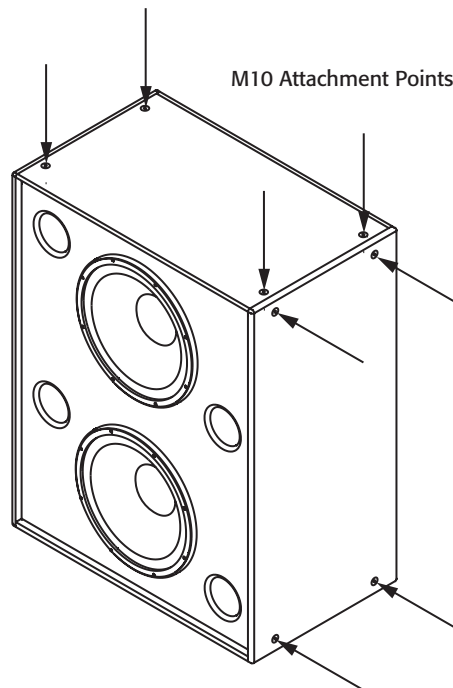
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Never exceed the rating of the hardware or equipment.

Consult a licensed, professional engineer regarding physical equipment installation. Ensure that all local, state and national regulations regarding the safety and operation of loudspeakers and related equipment are understood and adhered to.



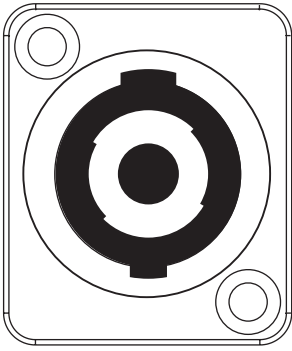
WARNING! Ensure all attachment points are installed and correctly tightened in order to maintain enclosure’s rated strength. Additionally, air leaks resulting from missing hardware will degrade the loudspeaker’s performance. Use only QSC’s M10 forged shoulder eye bolts. Contact QSC Technical Services department for complete information.



– Figure 3 –

Connections

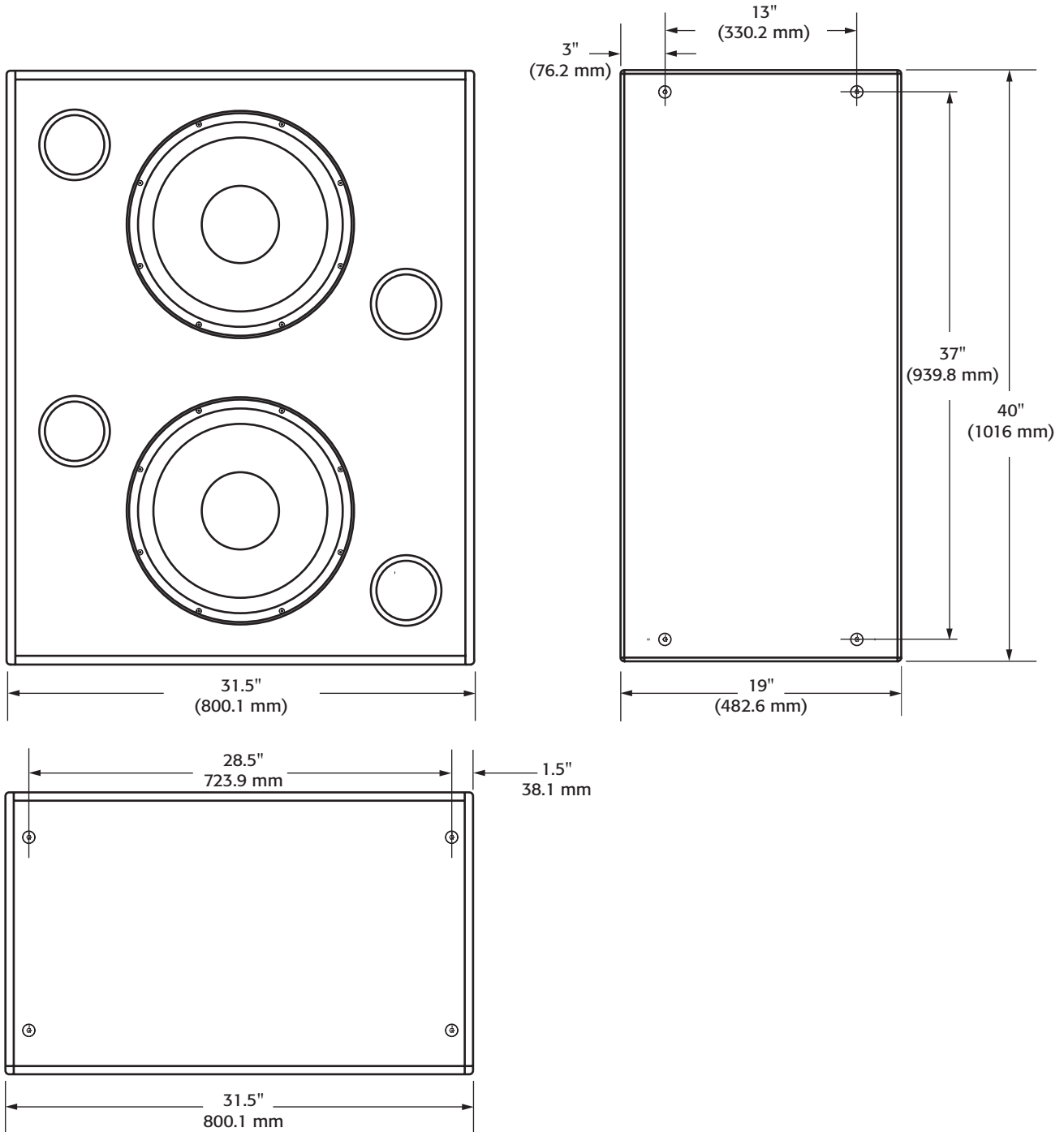
Amplifier connections to the LF-4215-F and LF-4215-8F are made on the rear panel via a Neutrik® NL4P speakON™ connector supplied by the installer. This connector provides power to both woofers via the 1+ and 1- terminals. The woofers are internally wired in parallel. Pre-made speakON™ cables using high grade, 2 or 4 conductor stranded wire are readily available from a number of suppliers and is highly recommended.



– Figure 4 –

	LF		No Connection	
Input	1+	1-	2+	2-
Pinout	Pos	Neg	N/A	N/A

Dimensions



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Specifications

LF-4215-F / LF-4215-8F

Frequency Range	
±3 dB	38 – 1000 Hz
-10 dB	30 – 1200 Hz useable range
Maximum Output	
	134.5 dB SPL calculated peak
Impedance	
LF-4215-F	4Ω nominal
LF-4215-8F	8Ω nominal
Maximum Input Power	
100 hours of 6 dB crest factor pink noise, 30 – 500 Hz	800 watts
2 hours of 6 dB crest factor pink noise, 30 – 500 Hz, AES method	1000 watts
Sensitivity (half space / watt / 1 meter)	
	99.5 dB half space, 96.5 dB full space, 35 – 1000 Hz, 1 watt, 1 meter
Transducers	
	Two 15" (381 mm) high-efficiency, low-frequency transducers featuring vented 4" (100 mm) copper voice coils. High-excursion/low-distortion design, with extremely high-power handling, and low thermal and port compression.
Recommended Processing	
	Subsonic filter below 30 Hz, >18 dB per octave, maximum recommended crossover frequency is 1000 Hz. QSC DSP configurations are available at www.qscaudio.com . Parameters for alternative processing hardware are available upon request.
Nominal Coverage	
	135° horizontal x 50° vertical at 500 Hz
Connectors	
	Neutrik® speakON™ NL4, LF 1+, 1-, No Connection 2+, 2-
Enclosure	
	Heavily braced 15 mm tour-grade plywood with 16 M10 load-rated attachment points.
Dimensions (HWD)	
	40" x 31.5" x 19" (1016 mm x 800.1 mm x 482.6 mm)
Shipping Weight	
	142 lb / 64.4 kg
Net Weight	
	134 lb / 60.8 kg



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