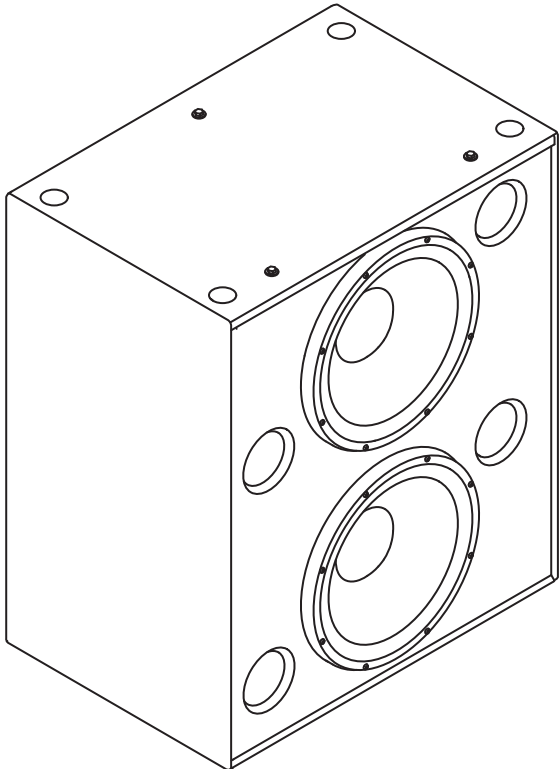


Cinema Low Frequency Loudspeaker User Manual



LF-2215 Low Frequency Loudspeaker



TD-001558-01-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.



NOTE: 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.



NOTE: 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



1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation opening. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. Adhere to all applicable, local codes.
12. Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.
13. Do not use any aerosol spray, cleaner, disinfectant or fumigant on, near or into the apparatus. Clean only with a dry cloth.
14. Do not submerge the apparatus in water or liquids.
15. Keep ventilation opening free of dust or other matter.

Maintenance and Repair



WARNING!: Advanced technology, e.g., the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. To avoid a danger of subsequent damage to the apparatus, injuries to persons and/or the creation of additional safety hazards, all maintenance or repair work on the apparatus should be performed only by a QSC authorized service station or an authorized QSC International Distributor. QSC is not responsible for any injury, harm or related damages arising from any failure of the customer, owner or user of the apparatus to facilitate those repairs.

Introduction

The LF-2215 dual 15" (381 mm) low frequency enclosure is designed specifically for cinema applications. Meeting cinema requirements for extended low frequency response differentiates the LF-2215 from more conventional "rock-and-roll" woofer systems. The LF-2215 covers the frequency range from 38 to 1500 Hz, depending upon the high frequency system requirements. With its tight spacing between woofers, the LF-2215 offers improved coupling and keeps coverage angles wide over a greater frequency range than more widely spaced designs.

The 550 watt, 15" transducers are well suited for cinema use. They feature 3" (76 mm) voice coils and vented pole pieces to ensure cool operation. Cooler temperatures increase transducer lifespan and decrease the problem of power compression at high power levels. The suspension and voice coil of each transducer have been designed to provide low distortion and high impact bass at high power levels.

The enclosure is constructed of high quality medium density fiberboard panels with stiffening braces on all panels and features separate woofer chambers. This prevents over-excursion of a transducer caused by improper box loading in the rare event of a transducer failure. The eight stiffening braces reduce panel resonance.

Both internal and external port openings are fully radiused ensuring smooth air flow at high power. This prevents audible port turbulence noise.

With symmetrical port loading, 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 levels.

Three T-nuts in the top of the enclosure provide easy mounting of QSC's MH-1060 mid-high frequency system.

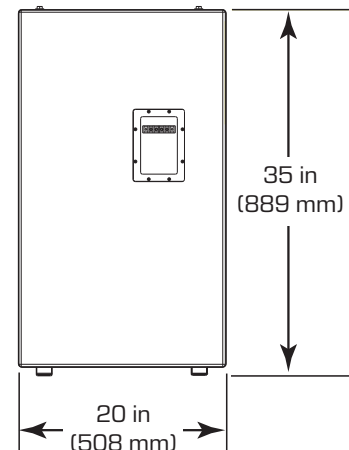
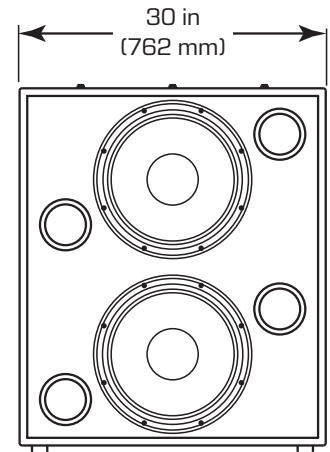
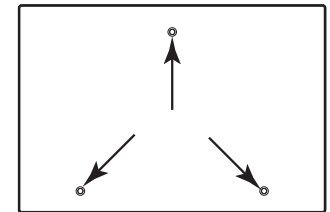
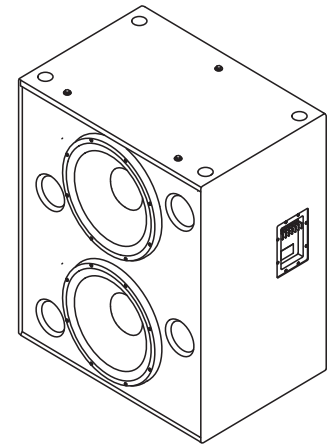
Enclosure is not designed to be suspended, flown, or rigged. Do not suspend, fly, or rig this enclosure.

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.

Install in accordance with QSC's instructions and a licensed, professional engineer. Only use attachments, mounts, accessories, or brackets specified by QSC. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way.



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, placement, or array. 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. Never exceed the rating of the hardware or equipment. Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation..



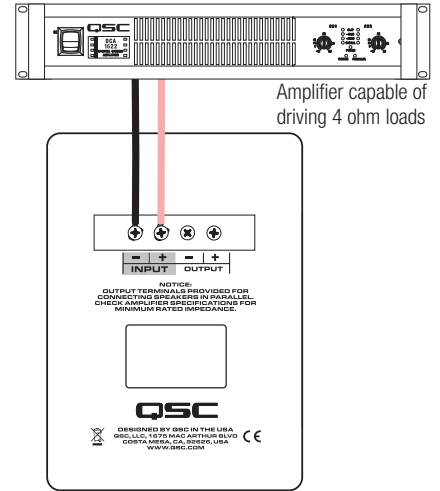
— Figure 1 —

Connections

Normal Connection

Refer to Figure 2

The LF-2215 has barrier strip screw terminals for connection. The terminals accept up to #10 AWG (5.3 mm²) stranded loudspeaker wiring. Use the largest wire size and shortest wire length possible for the application. Observe the polarity markings and keep polarity consistent throughout the system for best performance.

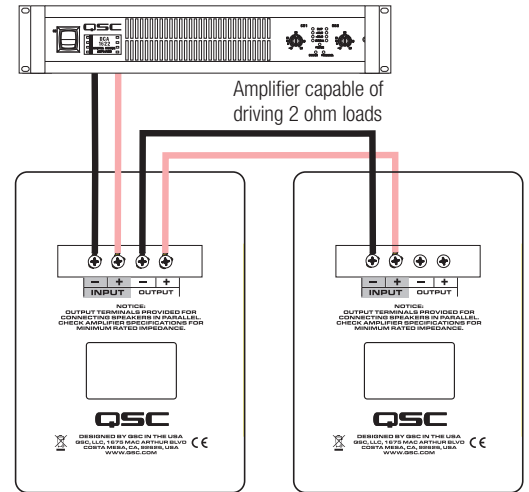


— Figure 2 —

Parallel Connection of Second LF-2215

Refer to Figure 3

The terminals labeled OUTPUT may be used to connect another LF-2215 in parallel. Connect the wires as shown in the illustration, at right. Note: If the LF-2215's internal wiring has been modified in any way, this may not function. If this is the case, remove the terminal cup and verify the presence of the factory yellow jumper and blue jumper wires; correct as required or have the loudspeaker serviced.



— Figure 3 —

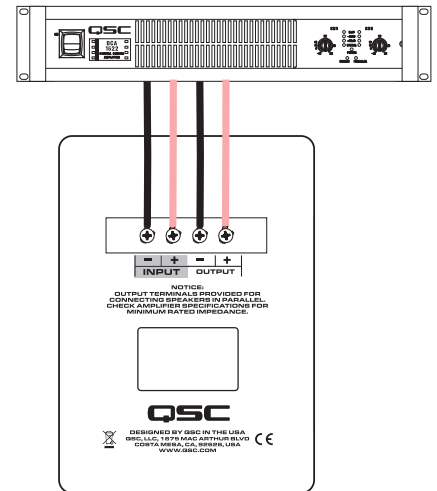
Individual Transducer Connection (requires modification)

Refer to Figure 4.

The transducers are wired in parallel inside the enclosure. If individual transducer connection is required, remove the terminal cup and remove the yellow and the blue jumper wires that are connected between the INPUT and OUTPUT terminals. Replace the terminal cup and mark the enclosure with a note of the modification.



CAUTION! Requires removal of terminal cup and removing both the yellow and the blue jumper wires that connect the INPUT and OUTPUT terminals.



— Figure 4 —

Specifications

(subject to change without notice)

Freq. Range	37 - 3500 Hz (-6 dB) 30-4000 Hz usable range (-10 dB)
Nominal Coverage	130 Horizontal x 50 Vertical at 600 Hz
Max. Output:	132 dB SPL calculated peak, 1 meter, half space, at rated rms power with 6 dB crest factor pink noise input, 30 - 300 Hertz. Based on nominal impedance. 126 dBA SPL calculated maximum continuous, 1 meter. The dBA scale is typically used to identify sound sources which can cause permanent hearing loss.
Impedance:	4 ohms nominal
Maximum Input Power	600 W RMS (2 hours of 6 dB crest factor pink noise, 30-300 Hertz) Based on nominal impedance. Recommended amplifier power capability- 1200 W RMS maximum into 4 ohms (per LF-2215)
Sensitivity	98 dB, 35 - 1000 Hertz, 1 watt, 1 meter
Recommended Processing	Subsonic filter below 30 Hertz, >18 dB per octave, maximum recommended crossover frequency is 1000 Hertz.
Connectors	Barrier strip screw terminals accept up to #10 AWG stranded wire. Four terminals: (two INPUT and two PARALLEL OUT). Transducers are internally wired in parallel. For independent transducer connection, remove blue jumper wire and yellow jumper wire on internal-side of terminal cup and mark enclosure accordingly..
Transducers	Two 15 in (381 mm) high-efficiency low-frequency transducers featuring vented 3" (76 mm) copper voice coils on polyimide film tape formers. High-excursion / low-distortion design, with extremely high power handling, and low thermal and port compression.
Enclosure	Quasi B4 alignment, ported enclosure with fully-flared ports, low-turbulence symmetrical-port design, tuned to 36 Hertz, constructed of medium-density fiberboard and heavily-braced. Features vandal resistant woofer mounting bolts.
Size (HWD)	35 in x 30 in x 20 in (889 mm x 762 mm x 508 mm)
Weight	
NET	172 lb (78 kg)
Shipping	195 lb (88 kg)



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