



CPL™ 5C⁺

Passive 2-way Coaxial Loudspeaker System

Operating Manual



Model Number or Name:

Date of Purchase:

Serial Number:

Dealer Name:

Crest Audio® CPL™ 5C⁺

The Crest Audio CPL 5C⁺ is an ultra-compact passive two-way coaxial loudspeaker designed for music playback, public address and live performance reinforcement applications where space is at a premium.

The CPL 5C⁺ can be utilized for both permanent installations and portable live sound applications. Perfect for public address, monitoring and background audio reinforcement purposes typically required in houses of worship, clubs, bars/restaurants, retail outlets plus education and corporate meeting facilities or anywhere high quality discrete audio distribution is required.

The CPL 5C⁺ is equipped with a premium 5 inch woofer having a 1.5 inch voice coil together with a coaxially mounted 1 inch exit Neodymium compression driver known for its smooth frequency response and non-fatiguing mid range. Conical directivity pattern of the loudspeaker is measured at 80° providing a wide yet well controlled audio coverage. An internal advanced crossover network maintains EQ and driver protection. Impedance of the loudspeaker is 16 Ohms allowing for easy daisy chaining. Connectivity is made via either looping 4-pin twist-lock or 4-pin Euroblock connectors.

The CPL 5C⁺ enclosure is built from prime-grade 15 mm plywood that offers sturdy mechanical and low resonant electro-acoustic characteristics together with a heavy-duty steel grille backed with acoustic foam to ensure maximum protection of the internal components. The loudspeaker is equipped with a total of 3 threaded suspension points offering multiple mounting options for various applications. Available in durable black and white finish.

Features

- Ultra-compact passive two-way coaxial loudspeaker
- Premium 5" woofer, 1.5" voice coil
- 1" Neodymium compression driver, 1.4" voice coil
- Continuous power handling: 100 Watts
- Nominal impedance: 16 Ohms
- Coverage pattern (HxV): 80° x 80°
- Provides a consistent sound character all through it's rated coverage angle due to the coaxial configuration
- Connectors: 2 x 4-pin twist-lock & 4-pin Euroblock
- 2+/- Loop Through
- Advanced crossover network
- Tweeter protection
- U-Bracket included
- 15 mm Plywood construction
- Textured polyurea paint
- Available in Black and White

Configuration: Ultra-compact 2-way coaxial passive speaker

Power Handling*: 100 Watts Continuous, 200 Watts Program, 400 Watts Peak

*To reach the rated power, there must be an infrasonic filter set to 100 Hz, 12 dB / Octave Butterworth minimum filtering. If the CPL 5C⁺ is used with a crossover for a Subwoofer, then the high pass section needs to meet this criteria at a minimum. A higher frequency and/or filter slope is acceptable.

Nominal Impedance: 16 Ohms

Sensitivity (1W/1m): 92 dB

Maximum SPL (1m): 112 dB @ 100 Watts; 118 dB @ 400 Watts Peak

Frequency Response*: 261 Hz - 20 kHz, ± 3 dB

*1m on-axis, swept-sine in anechoic environment

Frequency Range*: 91 Hz - 20 kHz, -10 dB

*1m on-axis, swept-sine in anechoic environment

Box Tuning Frequency: 103 Hz

Nominal Coverage Pattern (-6 dB): 80° H x 80° V

LF Driver: 1 x 5" (165 mm) Woofer - Crest Audio KP5W38

LF Driver Voice Coil: 1.5" (38 mm)

HF Driver: 1 x 1" (25.4 mm) Neodymium Compression Driver - Crest Audio 5C36NP1

HF Driver Voice Coil: 1.4" (36 mm)

Input Connections: 2 x 4-pin twist-lock (NL-4 style) & 1 x 4-pin Euroblock

Input, Pin 1+ = (+) positive; Pin 1- = (-) negative / Loop Through, Pin 2+ = (+) positive; Pin 2- = (-) negative

Enclosure Material: 0.6" (15 mm) Plywood

Finish: Textured polyurea paint, available in Black & White

Black Finish: RAL: 9004 Signal Black (Pantone: Black 6)

White Finish: RAL: 9003 Signal White (Pantone: 705)

Front: Full-coverage perforated steel grille, backed with acoustically neutral foam

Mounting Provisions: U-Bracket included. Three (3) M8 suspension points (1 top, 1 bottom, and 1 rear), top and bottom suspension points for U-Bracket, rear for safety chain or wire

Overall Dimensions (HWD):

Front - 7.28" x 7.28" x 8.0" (185 x 185 x 203 mm)

Net Weight: 11.6 lbs (5.3 kg)

CAUTION

Before attempting to suspend this speaker, consult with a certified structural engineer. Speaker can fall from improper suspension, resulting in serious injury and property damage. Do not suspend or mount any other product or device from this enclosure! Use only the correct mating hardware. All associated rigging is the responsibility of others. Maximum enclosure angle 30 degrees.

Whenever possible, in addition to the nominal primary mounting method, use a suitable safety chain or wire rope attached to one of the other groups of fly point inserts, and firmly attached to a suitable structural member as indicated by a certified structural engineer.

We recommend the use of thread-locker at the insert point bolts, so the bolts cannot vibrate loose. Never transport the cabinet using the array bracket or other mounting brackets as a structural member, while the cabinet is mounted on an array bracket or other mounting bracket and unsupported otherwise, as this may unduly stress the mounting inserts.

This Crest Audio loudspeaker should be suspended overhead only in accordance with the procedures and limitations specified in the User's Manual and possible manual update notices. This system should be suspended with certified rigging hardware by an authorized rigging professional and in compliance with local, provincial or national suspension ordinances.

INSTALLATION

A total of three (3) M8 1.25 mm per thread threaded mounting suspension points (1 top, 1 bottom, and 1 rear) are provided. The rear one is plugged with a hex key beveled head bolt.

The top and bottom mounting suspension points are for use with the included U-Bracket. The mounting suspension point on the rear is for use of a forged shoulder machinery eyebolt for a safety chain or wire rope. The forged shoulder machinery eyebolt should be an M8 size, 1.25 mm per thread, and must conform to at least DIN 580 or ASTM A489, or whatever local, provincial or national suspension ordinances or regulations may additionally require. Eyebolts must be used at a minimum as a pair, never use just one eyebolt to hang the speaker overhead.

WARNING

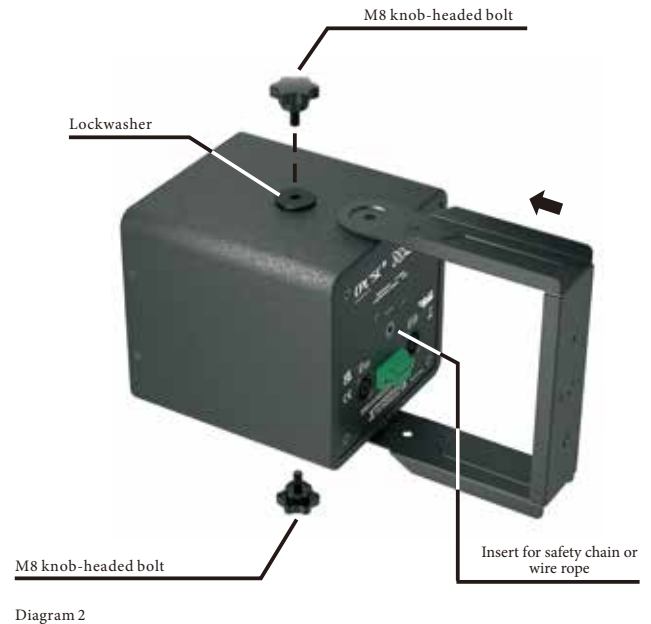
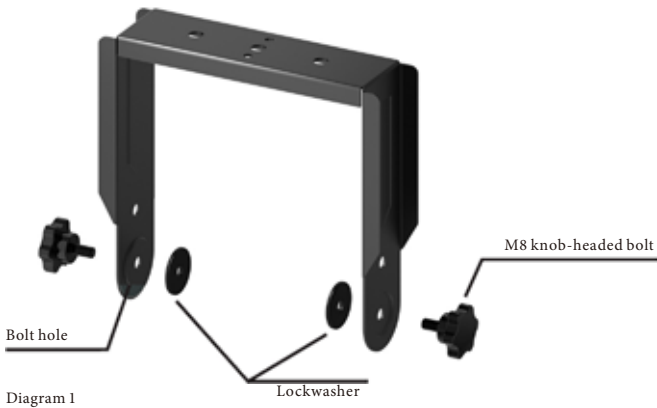
The CPL 5C⁺ coaxial passive 2-way loudspeaker system is very efficient and powerful! This sound system can permanently damage hearing! Use extreme care setting the overall maximum loudness!

The apparent sound level of the CPL 5C⁺ can be deceiving due to its clear, clean sound output. The lack of distortion or obvious distress can make the sound level seem much lower than it actually is. This system is capable of sound pressure levels (SPL) in excess of 118 dB at 1 meter from the speaker!

Installation methods for included mounting accessories

Note: The U-Bracket is a standard accessory, which has been included in the product package.

Installation Method 1 - U-Bracket



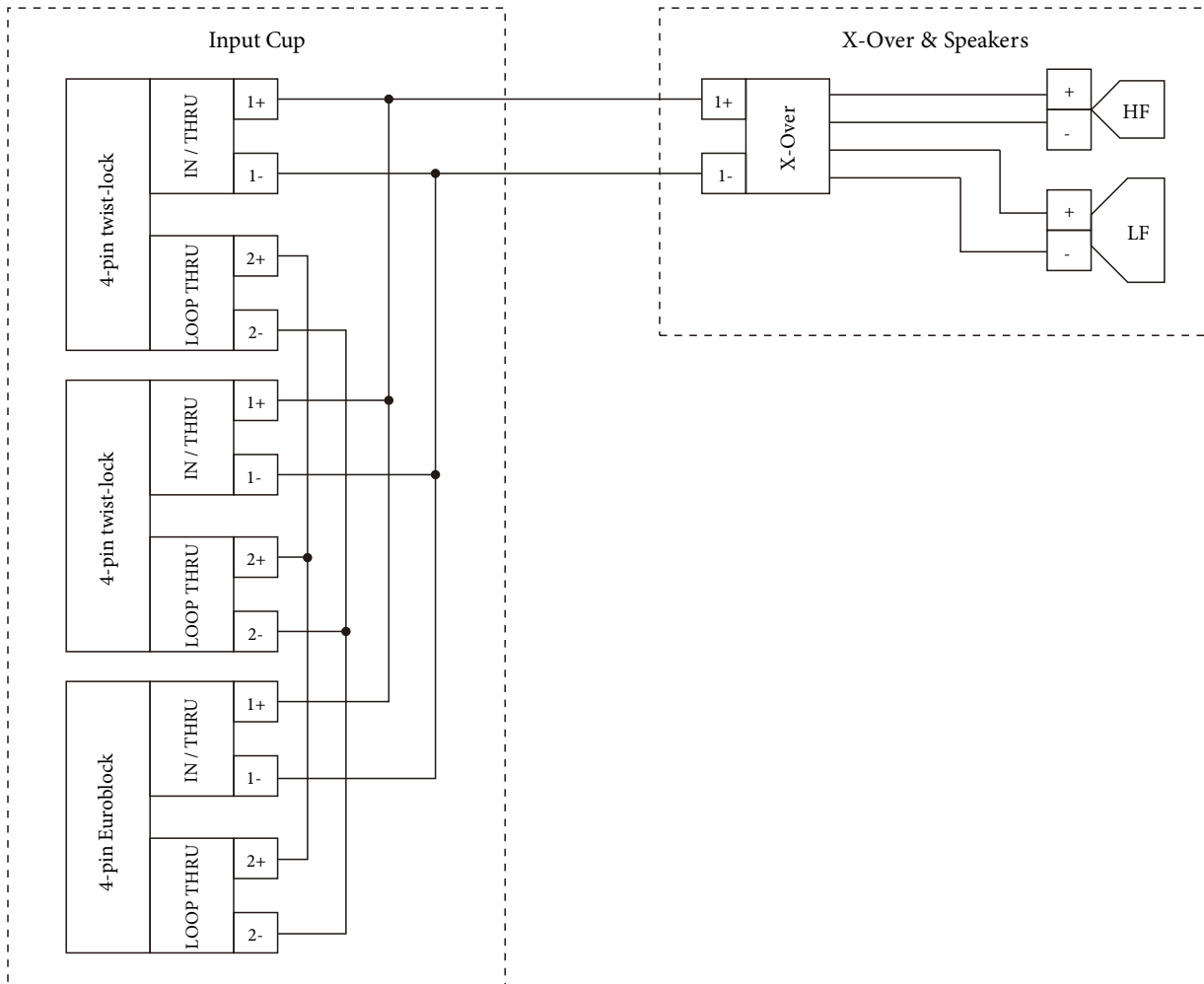
Use the large handled knob-headed bolts to mate the U-Bracket to the cabinet, placing lockwashers between the bracket and bolt. (See diagram 1 & 2 on page 4). Tighten the knob very firmly to retain the desired angle.

For permanent installations where the cabinet may be within reach of the public, regular hex head bolts can be used instead of the knob-headed bolts. These should be an M8, grade 8.8 or better, 1.25 mm per thread, metric bolt, that does not penetrate the cabinet past the cabinet surface more than 20 mm (approximately 3/4"). Metric M8 steel washers (not supplied) should be used to keep the hex head from pulling through the lockwasher (supplied rubber gasket).

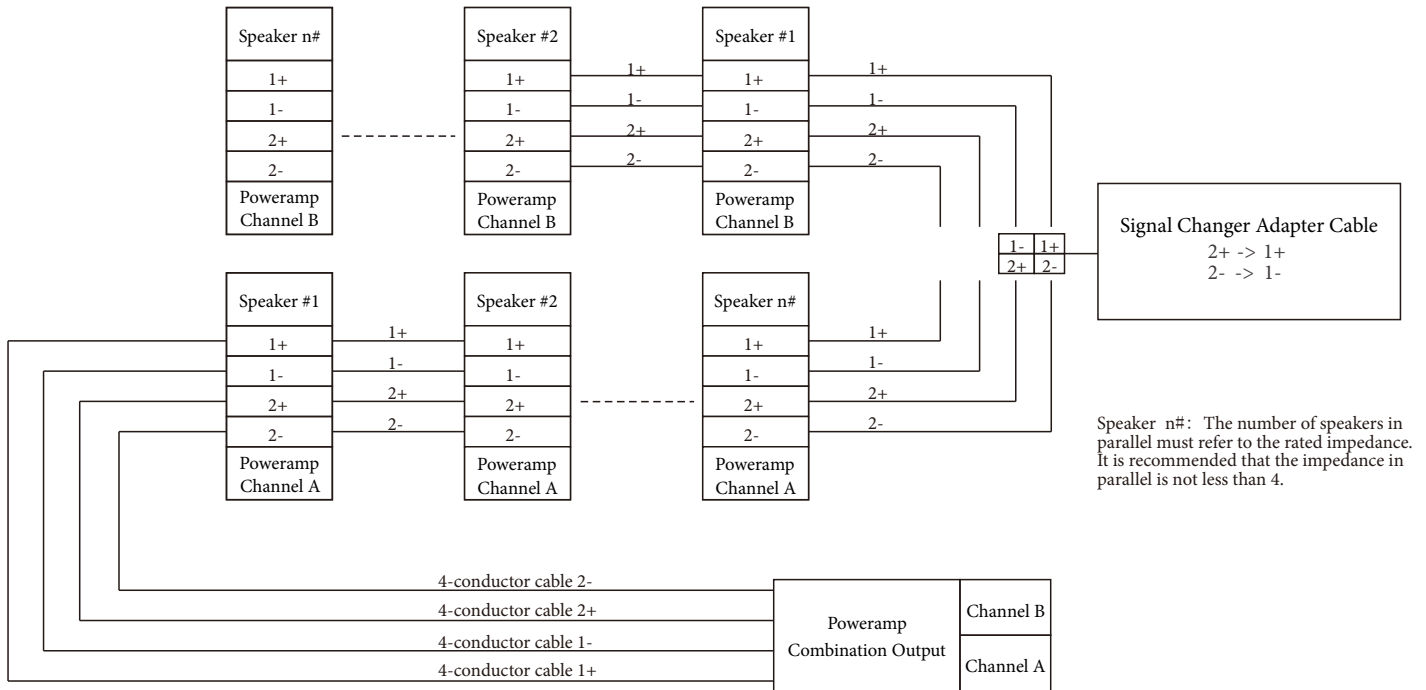
It is then recommended that thread-locker be used. Using hex head bolts with thread-locker will reduce the possibility for someone to attempt to unscrew the knob-headed bolts by hand to vandalize or otherwise alter the cabinets mounting.

To connect a safety chain or wire rope, an M8 eyebolt can be used in the insert point illustrated on page 4 (diagram 2). Specifications for the eyebolt are as follows: A forged steel shoulder-type lifting eyebolt, which meets the requirements of DIN 580 or ASTM A489, or whatever local, provincial or national ordinances or regulations may additionally require.

CPL+ Series Input & Loop Through Schematics



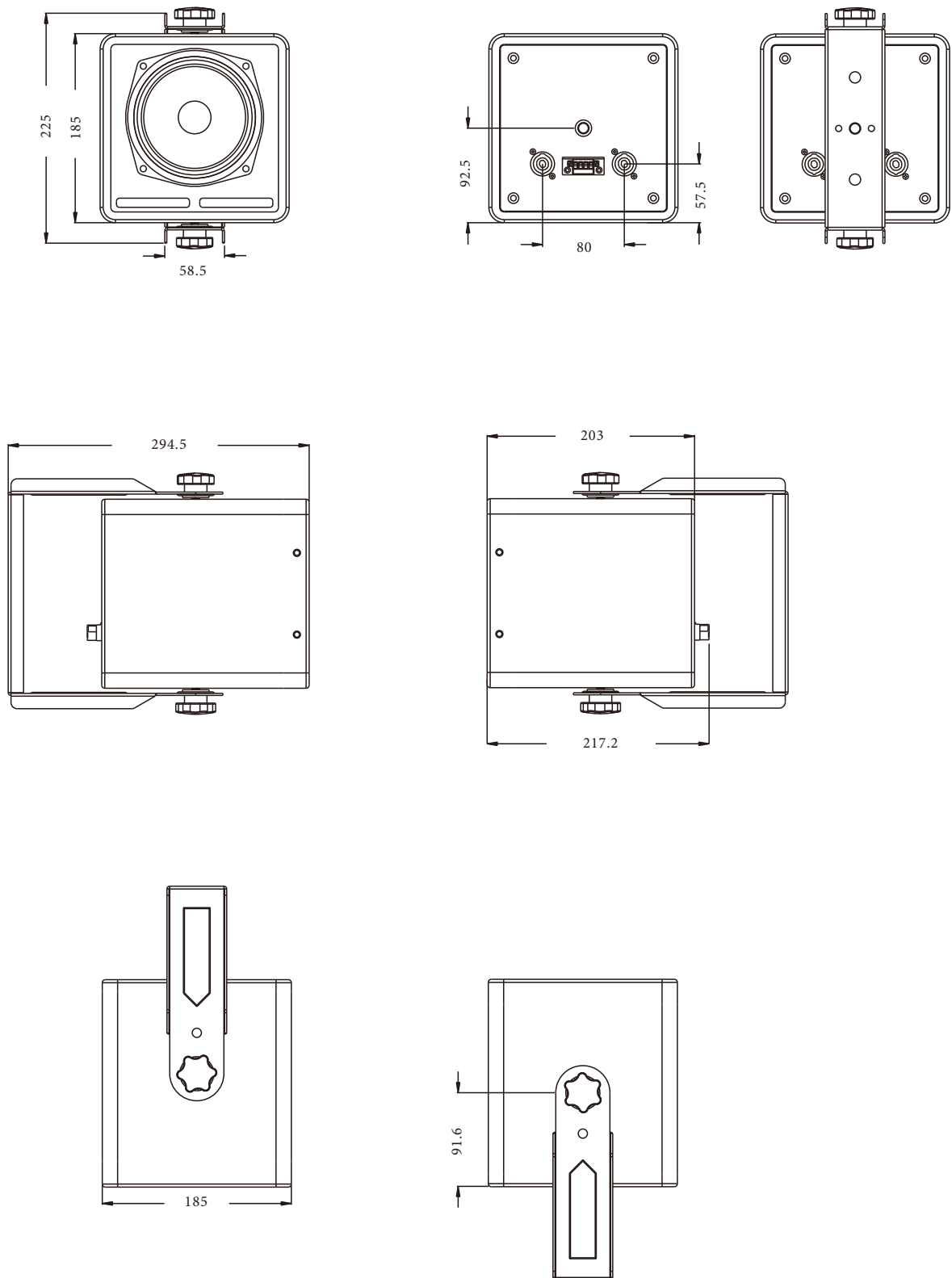
CPL+ Series Loop Through System Schematics



DIMENSIONS

EN

Unit: mm



The ultra-compact coaxial loudspeaker shall consist of a 5 inch (130 mm) low frequency transducer with 1.5 inch (38 mm) voice coil and a coaxially mounted 1 inch (25.4 mm) exit Neodymium compression driver with a 1.4 inch (36 mm) voice coil and a frequency dividing network installed within the enclosure.

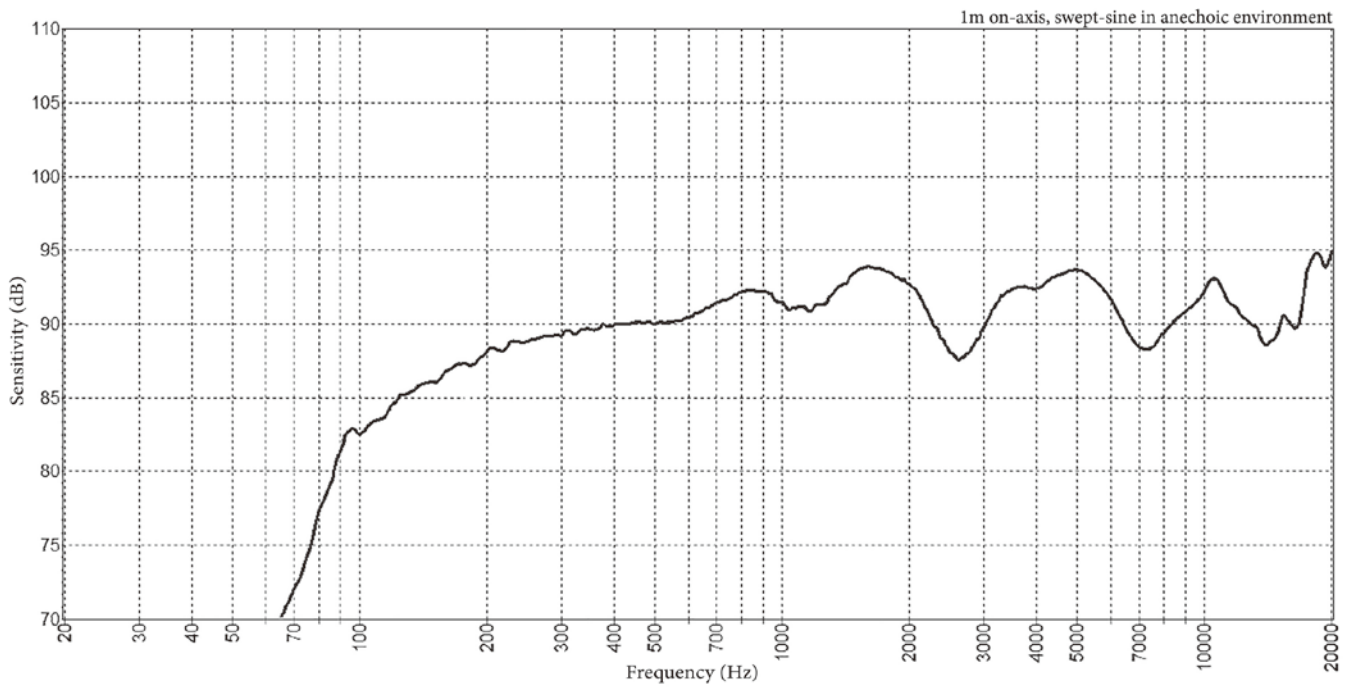
Performance specifications of a typical production unit shall be: Measured sensitivity SPL at 1 m (3.3ft) with 4.0V input, shall be 92 dB-SPL. Usable frequency response shall extend from 91 Hz to 20 kHz (10 dB below rated sensitivity, in full space, with no external equalization). Nominal impedance shall be 16 Ohms. Rated power capacity shall be at least 100 Watts continuous power and 400 Watts peak power, defined as 6 dB above a test signal of filtered random noise.

The system shall be protected against damage from occasional over-powering limiting the power to the network and transducers. The coaxial neodymium compression driver shall be capable of even coverage at a nominal 80° horizontal through 80° vertical distributed pattern.

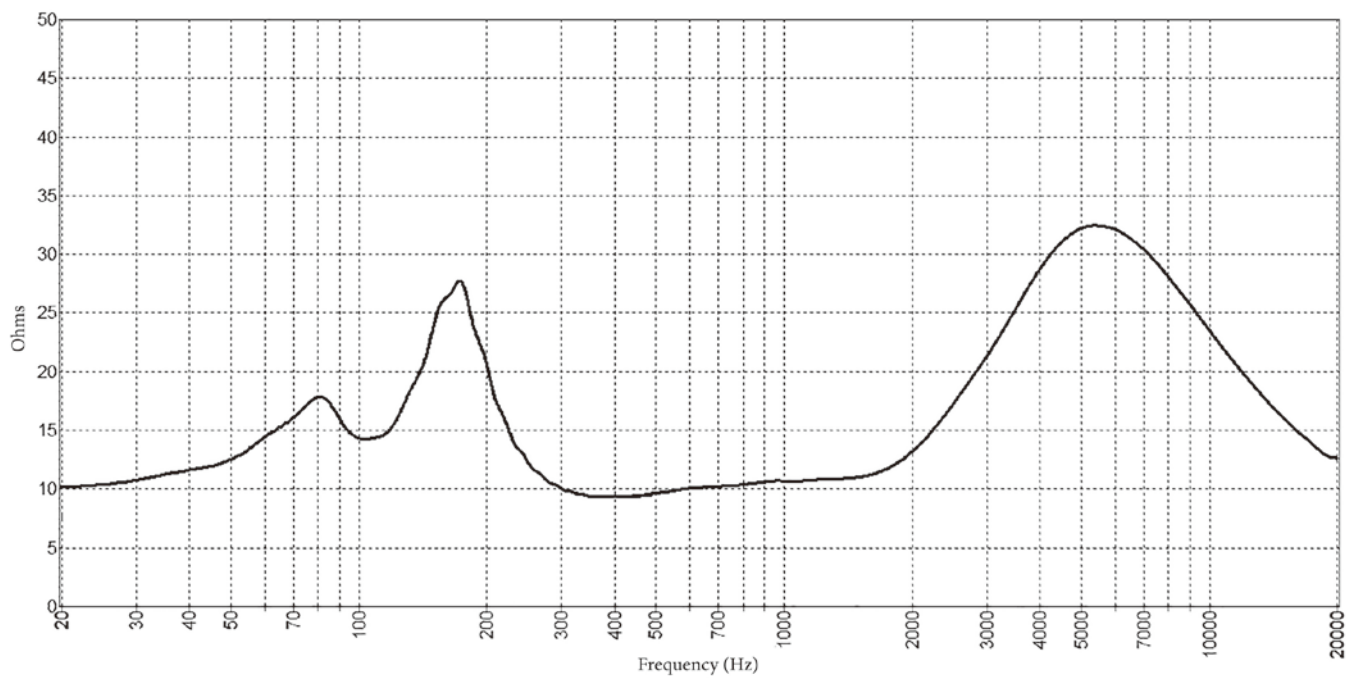
The enclosure shall be constructed from prime-grade 15 mm plywood. The loudspeaker shall be equipped with a total of three (3) suspension points. The grille shall be of heavy-duty steel backed with acoustically transparent foam. The external wiring shall be via either two 4-pin twist-lock or one 4-pin Euroblock connectors. The loudspeaker shall be 7.28 inches (185 mm) high by 7.28 inches (185 mm) wide by 8 inches (203 mm) deep weighing 11.6 pounds (5.3 kg). The finish shall be a paintable lightly textured black or white.

The ultra-compact coaxial loudspeaker shall be the Crest Audio CPL 5C⁺ with included U-Bracket.

Frequency Response



Impedance





www.crestaudio.com



Features and specifications subject to change without notice.

Crest Audio 5022 HWY 493 N. Meridian, MS 39305 (601) 483-5365 FAX (601) 486-1278



Logo referenced in Directive 2002/96/EC Annex IV
(OJ(L)37/38,13.02.03 and defined in EN 50419: 2005
The bar is the symbol for marking of new waste and
is applied only to equipment manufactured after
13 August 2005