CREST AUDIO

CPL210

Line array speaker system

Operating Manual

ENGLISH

CPL™ 210
Line array speaker system

Crest audio® CPL210 line array speaker system consists of two 10" neodymium magnet woofers and a 1.4" neodymium magnet compression driver with a highly flexible rigging system. Designed to provide modular coverage of small to medium venues and intended for use with the companion CPL118 sub , the CPL210 offers extreme versatility and high performance.

The adjustable rigging system provides for a classic straight line array configuration, or a number of different angling options, providing easy aiming of the system. Angles between the array modules is adjustable from 0˚ (straight), to 10˚ in 1˚ increments. Total maximum angle between two cabinets is 10˚.

Quick release pins are supplied with the rigging hardware to couple the CPL210 modules together and set the angles between them for quick and easy field adjustments or re-configurations of a line array.

FEATURES:

- 2-way Bi-Amp Line Source Array System
- 2x10" neodymium magnet woofers
- 610 watt continuous, 1220 watt program, 2440 watt peak power handling
- 110° H by 10° V coverage pattern (per one cabinet)
- Easy aiming angle adjustment rigging system
- Angle adjustable in 1 degree increments from 0 to 10 degrees, total angel between adjacent cabinets
- Inputs are two Neutrik® Speakon® 4-pin jacks in parallel
- 15mm birch plywood construction

SPECIFICATIONS

Frequency response, 1meter on-axis,swept-sine in anechoic environment:

110Hz to 14.3kHz (±6dB, with processing)
Usable Low Frequency limit, -10 dB point: 92 Hz

Power handling:

Low Frequency Section: 500W continuous, 1000W program, 2000W peak
High Frequency Section: 110W continuous, 220W program, 440W peak

Sound pressure level, 1watt, 1meter in anechoic environment:

Low Frequency Section: 98dB
High Frequency Section: 108dB

Maximum sound pressure level (1meter)*:

Low Frequency Section: 125dB SPL continuous, 128dB SPL program, 131dB SPL peak
High Frequency Section: 128dB SPL continuous, 131dB SPL program, 134dB SPL peak
∗Note: This spec is for one module at 1 meter, a line array of 6 units has much higher output at distance due to line source effect where SPL falls off at 3 dB per distance doubling rather than 6 dB.

Nominal Radiation Angle measured at -6dB point of polar response:

110 degrees Horizontal by 10 degrees Vertical
(One module only, straight line array of more than 1 module narrows vertical dispersion accordingly)

Transducer complement:

Low Frequency Section: 2x10 in. neodymium magnet woofers, 10HPL64N neodymium 2.5" VC
High Frequency Section: 1x1.4in. Compression Tweeters, DN14.30T neodymium 3" VC

Box Tuning Frequency (Sealed): Low Frequency Section: 65 Hz

Impedance (Z):

Low Frequency: Nominal: 8 Ohms, Minimum: 5.8 Ohms
High Frequency: Nominal: 8 Ohms, Minimum: 7.6 Ohms

Input Connections:

2x Neutrik® 4-pin Speakon® Jack
Low Frequency: PIN 1+ = LF+, PIN 1- = LF-
High Frequency: PIN 2+ = HF+, PIN 2- = HF-

Enclosure Materials & finish:

15mm birch plywood finished in black painted finish, perforated steel grille finished in black powder coat paint.

Dimensions (H x W x D):

292 mm x 687mm x 448 mm
11.5" x 27.031" x 17.625"

Net Weight:

29.48kg(65lbs)

Compression Tweeter Warnings and Cautions

Warning! Do not feed a full-range signal to the tweeters in the CPL210! This could damage the tweeters!

It is recommended that for set-up or testing purposes, a high frequency sweep starting or ending no lower than 300 Hz be used to verify that the tweeters are connected to the high frequency output of the crossover/processor. If the wiring has been swapped, and the signal is mistakenly fed to the woofers, output will fall off significantly above 5 kHz. Always double-check and test your wiring before applying any music signals to the system! The compression tweeters are connected to the Neutrik® Speakon® pins 2+ and 2-, as per industry standards.

Rigging Instructions

NOTE: Before you fly the array, be sure to inspect the rigging and flying hardware to insure that it is mechanically sound and has not been damaged, there should be no significant distortion of the shape of the coupling brackets, cabinet brackets, Halo or fly bar, and the hardware should be checked for tightness.

⚠ This PEAVEY 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. ALWAYS USE PROPER GRADE HARDWARE.

⚠ 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. Use only the correct mating hardware. All associated rigging is the responsibility of others. Maximum enclosure angle 30 degrees. Failure to follow proper rigging specifications listed in the manual may result in injury or death.

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 points, and firmly attached to a suitable structural member as indicated by a certified structural engineer. CAUTION: ALWAYS USE SAFETY CHAIN OR WIRE ROPE.

⚠ IF ANY OF THE RIGGING, OR THE HALO OR FLY BAR HAS BEEN DAMAGED OR DISTORTED, DO NOT USE, AND DO NOT FLY THE ARRAY UNTIL
THEY CAN BE REPLACED OR REPAIRED!

DO NOT USE THE PIVOT BAR OR ANGLE SLIDER BRACKET AS HANDLES TO TRANSPORT THE CABINETS!

⚠ DO NOT TRANSPORT THE CABINETS IN ARRAY CONFIGURATION COUPLED TOGETHER, EXCEPT WITH THE RECOMMENDED TRANSPORT CART AND IN THE STIPULATED MANNER FOR THAT CART. TRANSPORT IN SUCH AN UNAPPROVED MANNER VOIDS THE WARRANTY, AND THE SYSTEM WOULD BE CONSIDERED UNSAFE TO BE FLOWN AFTER SUCH AN UNAPPROVED TRANSPORT EVENT.

Use only the correct mating hardware. All associated rigging is the responsibility of others.

Correct use and seating of the Quick Release Push Lock Pins Used with all CPL™ rigging hardware.

When using the Quick Release Positive Lock Pins, when the Quick Release Push Lock Pins are inserted, they should be fully seated, so that the black shoulder near the end of the pin has been placed flush with the side of the bracket, or as far in as the pin hole cavity will allow it to be inserted.
You will have to fully depress the center push-button to do this.
You should not be able to pull these pins out unless the center push-button is fully depressed.
INSPECT RIGGING ANNUALLY.

Hanging CPL™210 Cabinets to another CPL™210 Cabinets

1. Take out the first speaker, remove the quick release locking pins on the rear side of the top and slide the front sling upward. Don't fix the locking pin, see Fig.1 and 1a.

Figure1

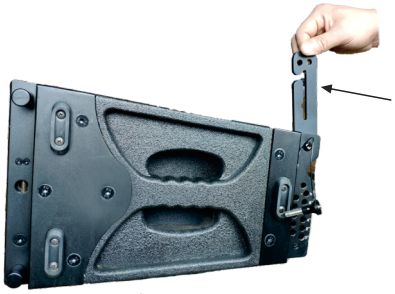


Figure1a

2. After removing the cabinet hang strap, insert the locking pin into the positioning point.

3. Take out the second speaker, pull out the front locking pin, and eject the front cabinet hang strap, see Fig. 2 .

Figure2

4. Adding the second Cabinet.
The second speaker is stacked on the first speaker, and the first speaker front lock pin is pulled out; the second speaker is aligned with the front hanger of the first speaker, and the lock pin is released from the connector. Bounce into the fixed position, see Fig.3 and 3a.

Figure3

Figure3a

5. Lift the rear of the second speaker and place the rear cabinet hang strap of the first speaker into the positioning slot of the second speaker, see Fig.3a.

6. According to the design suspension angle, the insertion lock pin is fixed, see Fig.4.

Figure4

Hanging CPL™210 Cabinets to CPL™118 Cabinets and CPL118 halo

1. Take an CPL118 and slide up the cabinet hang strap at the back of the cabinet, see Fig.1.

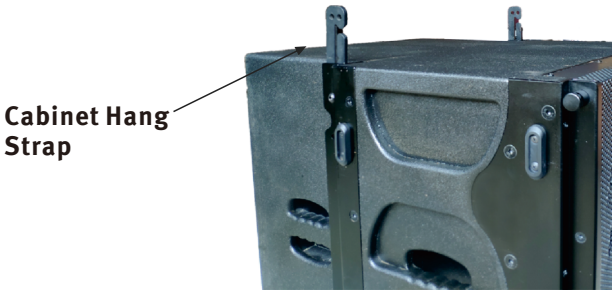


Figure1

2. Take the CPL118 halo, take out the front halo ear, pull out the lock pin in front of the CPL118 cabinet, and put the halo on the CPL118 cabinet. After the halo ear is aligned with the cabinet, loosen the lock pin and fix it, see Fig.2 and 2a.

Figure2

Figure2a

3. CPL118 rear cabinet strap is aligned with halo and fixed with lock pin after mounting hole, see Fig.3.

Figure3

4. Pull out the front locking pin under the CPL118 cabinet, pop out the cabinet strap, and then take out the rear locking pin under the cabinet, see Fig.4 and 4a.

Figure4

Figure4a

5. Use the hoist to lift the CPL118 cabinet that has been assembled on the halo to the appropriate height. Then lift the CPL210 with the assembled flying hardware to the bottom of the CPL118 cabinet. Pull the locking pins on both sides of the CPL210 cabinet to align the CPL118 cabinet to ensure the front end of the CPL118 cabinet. The cabinet hang strap on both sides are assembled with the front hardware of the CPL210 cabinet, and then the lock pins are loosened. see Fig.5 .

Figure5

Figure5a

Figure5b

6. Install the cabinet hang strap on both sides of the rear end of the CPL210 cabinet into the top CPL118 hanger, and insert the lock pin according to the designed angle. see Fig.5a and 5b.

Processor setting:

CPL210 processor settings

Specific Settings for PCX260 ONLY

CPL118 Subwoofer to CPL210 Crossover:
Gain=+2.0dB
Sub=24dB/Oct. BW@27.2Hz
Sub=24dB/Oct. BW@99.2Hz
Polarity Normal
Delay=0.0ms(None)

Woofer Output Channel Filters:
Gain=0dB
Crossover Settings: 24dB/Oct. BW@78.7Hz
24dB/Oct. BW@1.41kHz
Polarity Normal
Delay=0.333ms
PEQ: -0.8dB@387.8Hz, Q=3.0
-3.7dB@511.7Hz, Q=3.4
-5dB@740.5Hz, Q=3.2

Tweeter Output Channel Filters:
Gain=-2.5dB
Crossover Settings: 12dB/Oct.BW@2.05kHz
48dB/Oct.LK@19.25kHz
Polarity Inverse
Delay=0ms(None)
PEQ: -3.4dB@1.59kHz, Q=2.2
-1.5dB@2.41kHz, Q=3.8
-5.2dB@2.96kHz, Q=2.2
-3.7dB@4.09kHz, Q=2.5
-3.8dB@5.92kHz, Q=3.0
-2.2dB@8.0kHz, Q=2.8
-3.7dB@11.31kHz, Q=3.8

INFORMATION ON THE FLYING HARDWARE FOR THE CPL118 Halo (Available Separately)

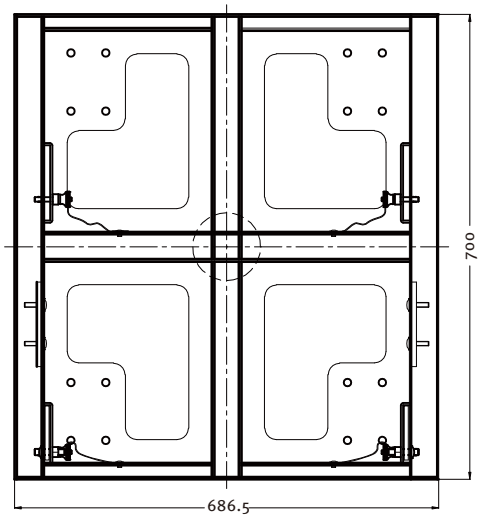
CAUTION ! Before attempting to suspend any CPL™ Rigging Hardware with or without speakers hung from it, consult a certified structural engineer. The Halo/Fly Bar and/or speaker array can fall from improper suspension, resulting in serious injury and property damage. Use only the correct mating hardware. All associated rigging is the responsibility of others.

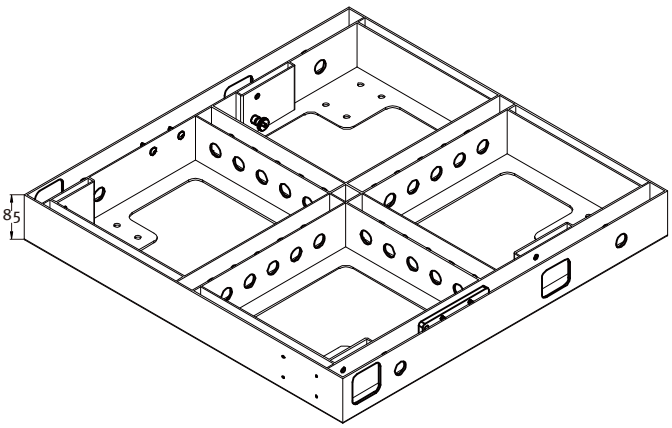
This PEAVEY loudspeaker should be suspended overhead only in accordance with the procedures and limitations specified in the User's Manual and possible manual update notices. This system should be suspended with certified rigging hardware by an authorized rigging professional and in compliance with local,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

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 points, and firmly attached to a suitable structural member as indicated by a certified structural engineer. CAUTION: ALWAYS USE SAFETY CHAIN OR WIRE ROPE.

Connects the CPL210 to the overhead rigging.
4x 8mm quick locking pins are provided on the halo to suspend the CPL210 speakers.

Specifications:
Halo Only Dimensions H x W x D:
3.34" x 27.03" x 27.55" (85mm x 686.5mm x 700mm)
Weight:55.55lbs./25.2kg





Material: The whole halo is made of 3mm iron plate welded, the shape is in the shape of a field, and the middle of halo is hollow.

Finish: Entire Halo is flat black powder coated paint finish.

Working Load Limit: 380 kg / 837 lbs. for Ultimate Strength Design Factor of 10:1
(This meets PLASA North America criteria and typically exceeds local USA safety requirements.)
Working Load Limit: 340kg / 749 lbs. for Ultimate Strength Design Factor of 12:1
(This is in compliance with the European Union mandated Safety Factor)

Maximum Number of CPL™210 passive cabinets: 10

Maximum Number of CPL™118 Sub cabinets: 5
(Note: CPL118 Sub cabinets do NOT articulate or angle, they must be hung at a zero degree angle.)

Can fly up to 5 CPL118 Subs, or 10 CPL210.

Maximum Combined Number of CPL™ 210 and CPL™ 118 Sub cabinets:

MIX OF SUBS VERSUS 2-Ways

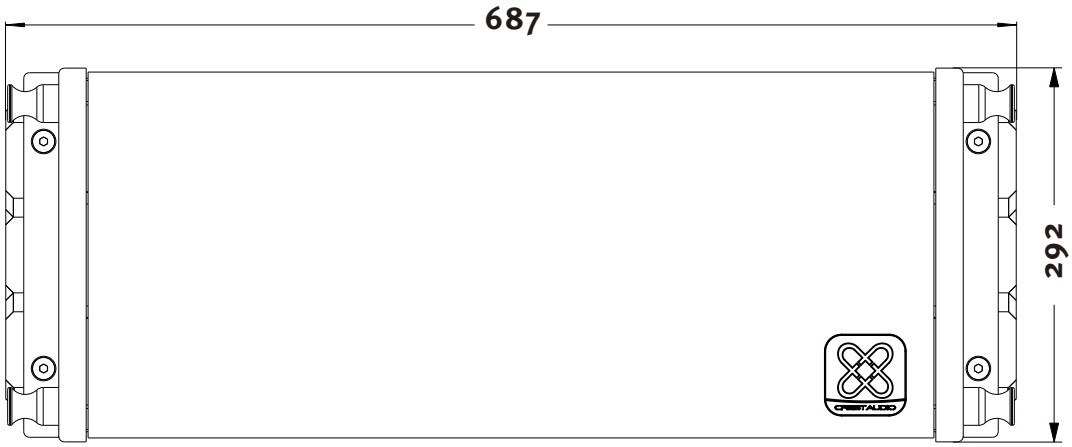
Subs	2-Ways
0	10
1	8
2	6
3	3
4	1
5	0

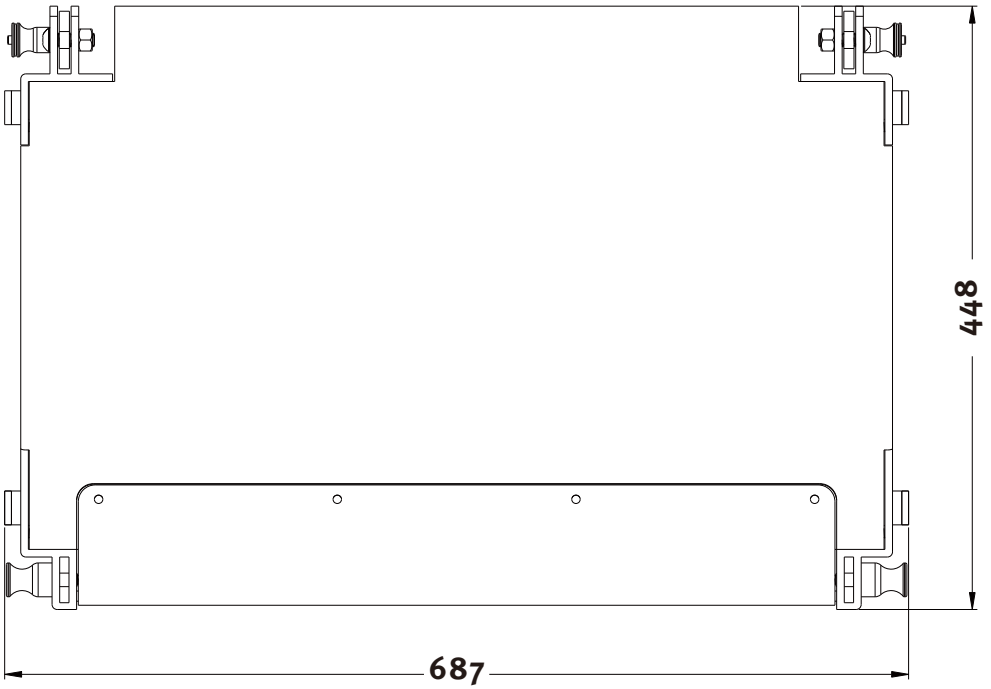
NOTES:
The ultimate strength for the CPL™ 210 loudspeaker system rigging hardware was determined utilizing calibrated and certified pull tests.
More complete information on the Crest audio® CPL210 Rigging System and the Halo can be found in the unit's Owner's manual, or by contacting Crest audio®.
Design and specifications subject to change without notice.

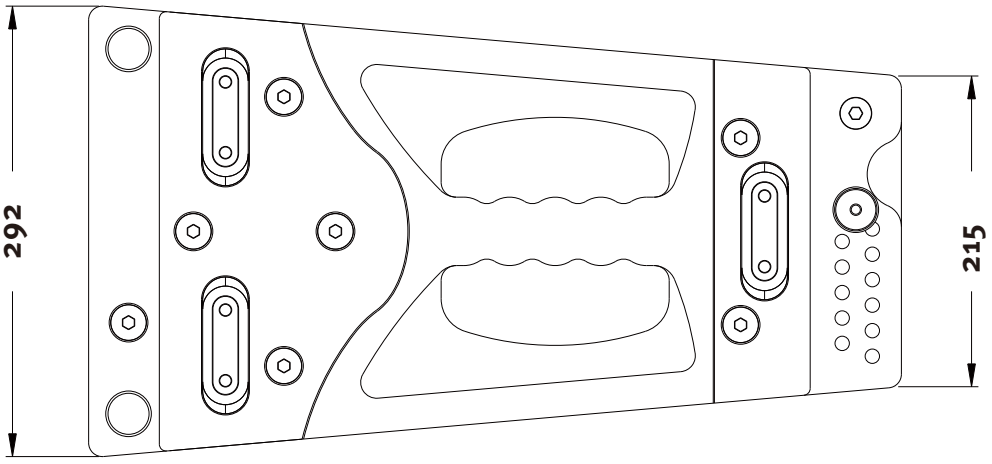
CAUTIONS
WARNING !
IMPORTANT INFORMATION FOR STRUCTURAL ENGINEER AND RIGGING PERSONNEL.
Before you fly the array, be sure to inspect the rigging and flying hardware to insure that it is mechanically sound and has not been damaged. There should be no significant distortion of the shape of the Halo coupling ears, cabinet straps, Angle Slider bracket or Rail, Pivot Bar or a fly bar, and the hardware should be checked for tightness.
CAUTIONS:
IF ANY OF THE BRACKETS, RAILS, CABINET STRAPS, PIVOT BAR OR THE FLY BAR HAS BEEN DAMAGED OR DISTORTED, DO NOT USE, AND DO NOT FLY THE ARRAY UNTIL THEY CAN BE REPLACED OR REPAIRED!
DO NOT USE THE PIVOT BARS AS HANDLES TO TRANSPORT THE CABINETS!

Dimensions:

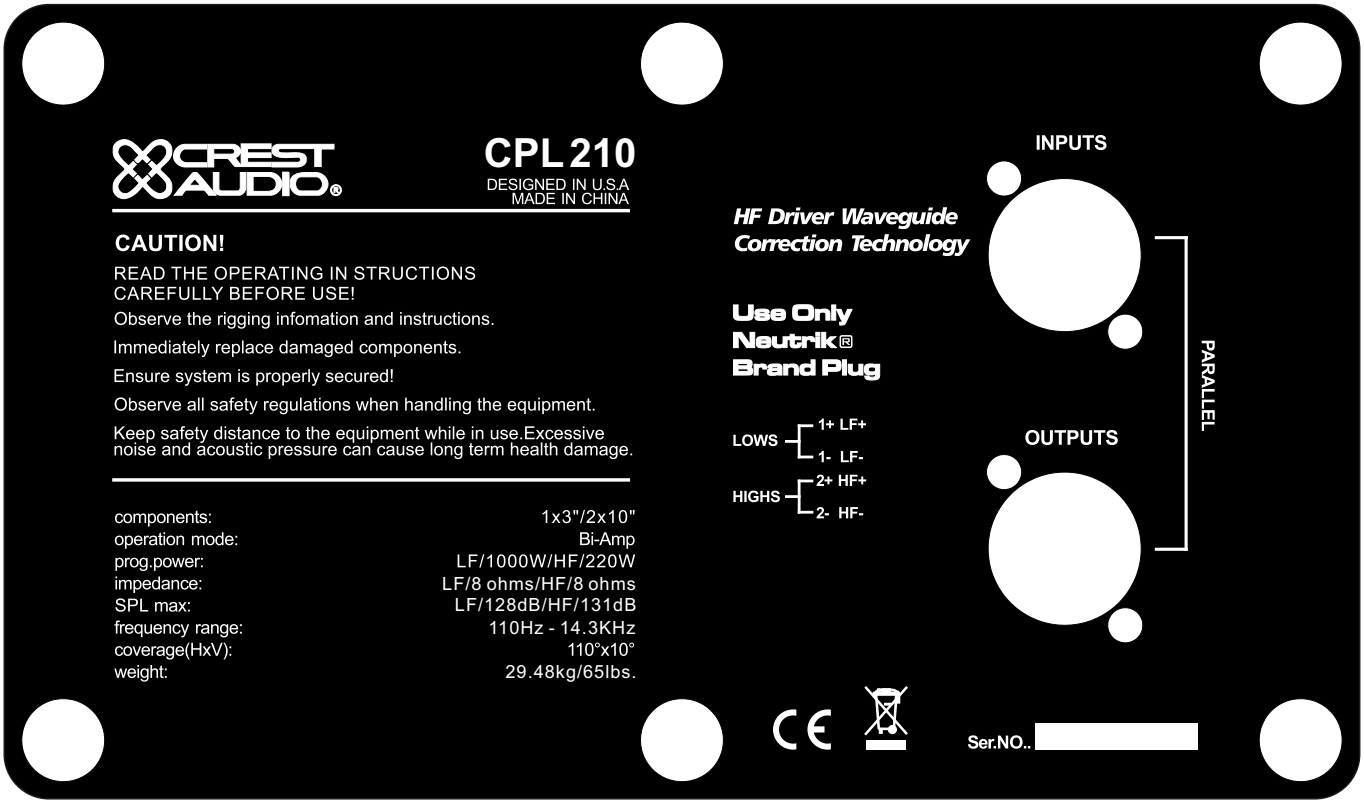
Unit:mm







Input Cup


CREST AUDIO®
CPL 210
DESIGNED IN U.S.A
MADE IN CHINA
CAUTION!
READ THE OPERATING IN STRUCTIONS CAREFULLY BEFORE USE!
Observe the rigging infomation and instructions.
Immediately replace damaged components.
Ensure system is properly secured!
Observe all safety regulations when handling the equipment.
Keep safety distance to the equipment while in use.Excessive noise and acoustic pressure can cause long term health damage.
components: 1x3"/2x10"
operation mode: Bi-Amp
prog.power: LF/1000W/HF/220W
impedance: LF/8 ohms/HF/8 ohms
SPL max: LF/128dB/HF/131dB
frequency range: 110Hz - 14.3KHz
coverage(HxV): 110°x10°
weight: 29.48kg/65lbs.
HF Driver Waveguide Correction Technology
Use Only Neutrik® Brand Plug
LOWS 1+ LF+ 1- LF-
HIGHS 2+ HF+ 2- HF-
INPUTS
OUTPUTS
PARALLEL
Ser.NO..

www.peaveycommercialaudio.com

Warranty registration and information for U.S. customers available online at
www.peaveycommercialaudio.com/warranty
or use the QR tag below

Features and specifications subject to change without notice.

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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