Venu Series

User Guide V1.0

Version 1.0

This user guide is subject to change without notice.
For the latest online version, visit: www.voidacoustics.com

Contents

1 Safety and regulations

1.1 Important safety instructions

The lightning flash with and arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Safety instructions - read this first

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 openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat source such as radiators, heat registers, stoves, or other such apparatus that produce heat.
9. Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect power cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
11. Only use attachments and accessories specified by Void Acoustics.
12. Only use with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the 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.
15. Since the mains power supply cord attachment plug is used to disconnect the device, the plug should always be easily accessible.
16. Void loudspeakers can produce sound levels capable of causing permanent hearing damage from prolonged exposure. The higher the sound level, the less exposure needed to cause such damage. Avoid prolonged exposure to the high sound levels from the loudspeaker.

1.2 Limitations

This guide is provided to help familiarise the user with the loudspeaker system and its accessories. It is not intended to provide comprehensive electrical, fire, mechanical and noise training and is not a substitute for industry-approved training. Nor does this guide absolve the user of their obligation to comply with all relevant safety legislation and codes of practice.

While every care has been taken in creating this guide, safety is user-dependent and Void Acoustics Research Ltd cannot guarantee complete safety whenever the system is rigged and operated.

1.3 EC declaration of conformity

Manufacturer:
Void Acoustics Research Ltd,
Unit 15 Dawkins Road Ind Est,
Poole, Dorset,
BH15 4JY,
United Kingdom.

We declare the under our sole responsibility the following product models: Venu 6, 8, 10, 12, Sub, Bass, X, 115, 215, 210i

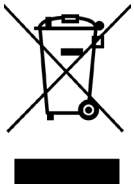
are intended to be used as loudspeakers and are in conformity with the following EC Directives, including all amendments, and with national legislation implementing these directives and standards:

- 2006/95/EC Low Voltage Directive
- 2004/108/EC Electromagnetic Compatibility Directive
- 2002/95/CE RoHs Directive
- BS EN 60065:2002
- BS EN 55103-1/-2
- BS EN 61000-3-2
- BS EN 61000-3-3
- BS EN 61000-4-2
- BS EN 61000-4-3
- BS EN 61000-4-4
- BS EN 61000-4-5
- BS EN 61000-4-6
- BS EN 61000-4-11

Alex Skan
Technical Director

1.4 WEEE directive

If the time arises to throw away your product, please recycle all the components possible.



This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or land-fills will be reduced and natural resources will thus be conserved.

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment. Void Acoustics Research Ltd complies with the Directive 2002/96/EC and 2003/108/EC of the European Parliament on waste electrical finance the cost of treatment and recovery of electronic equipment (WEEE) in order to reduce the amount of WEEE that is being disposed of in land-fill sites. All of our products are marked with the WEEE symbol; this indicates that this product must NOT be disposed of with other waste. Instead it is the user's responsibility to dispose of their waste electrical and electronic equipment by handing it over to an approved reprocessor, or by returning it to Void Acoustics Research Ltd for reprocessing. For more information about where you can send your waste equipment for recycling, please contact Void Acoustics Research Ltd or one of your local distributors.

2 Limited warranty

Limited warranty

The warranty

For a period of three (3) years from the date of delivery to the original purchaser (as shown on the original invoice or sales receipt; a copy of this may be required as proof of warranty dates), Void Acoustics Research Ltd (hereinafter 'Void') warrants to the Original Owner (person or company who originally purchased the product brand new from either Void or a Void Authorised Dealer/Distributor) of each new Venu Series product (provided it was purchased at an Authorised Void Dealer) that it is free of defects in materials and workmanship and that each product will meet or exceed all factory published specifications for each respective model. Void agrees to repair or replace (at its discretion) all defective parts at no charge for labour or materials; subject to following provisions:

Warranty violations

Void shall take no responsibility for repair or replacement as specified under this warranty, if the damaged product has been subject to misuse, accident, neglect or failure to comply with normal maintenance procedures; or if the serial number has been defaced, altered or removed. Nor will Void accept responsibility for, or resulting from, improper alterations or unauthorised parts or repairs. This warranty does not cover any damage to speakers or any other consequential damage resulting from breach of any written or implied warranty.

Void warranty provisions

Void will remedy any defect, regardless of the reason for failure (except as excluded) by repair, or replacement. Void will remedy the defect and ship the product within a reasonable time after receipt of the defective product at a Void Authorised Service Centre.

To obtain warranty service

If a Void product requires service, the Owner must contact Void or an Authorised Void Service Centre to receive an R.A.N. (Return Authorisation Number) and instructions on how to return the product to the Void Authorised Service Centre, or to Void.

Void (or its Authorised Service Centre) will initiate corrective repairs upon receipt of the returned product. Please save the original carton and all the packing materials in case shipping is required. All products being returned to the factory or service centre for repairs must be shipped prepaid.

If the repairs made by Void or the Void Authorised Service Centre are not satisfactory, the Owner is instructed to give written notice to Void. If the defect or malfunction remains after a reasonable number of attempts by Void to remedy the defect or malfunction, the Original Owner shall then have the option to elect either a refund or replacement of said Void product free of charge. The refund shall be an amount equal to but not greater than the actual purchase price, not including any taxes, interest, insurance, closing costs and other finance charges (minus reasonable depreciation on the product). If a refund is necessary, the Original Owner must make the defective or malfunctioning product available to Void free and clear of all liens or other restrictions.

Equipment modifications

Technical and design specifications are subject to change without notice.

Void reserves the right to modify or change equipment (in whole or part) at any time prior to delivery thereof, in order to include therein electrical or mechanical improvements deemed appropriate by Void, but without incurring any liability to modify or change any equipment previously delivered, or to supply new equipment in accordance with any earlier specifications.

Disclaimer of consequential and incidental damages

You, the Original Owner, are not entitled to recover from Void any incidental damages resulting from any defect in the Void product.

This includes any damage to another product or products resulting from such a defect.

Warranty alterations

No person has the authority to enlarge, amend, or modify this Warranty. This Warranty is not extended by the length of time which the Original Owner is deprived of the use of product. Repairs and replacement parts provided pursuant to the Warranty shall carry only the non-expired portion of the Warranty.

This Statement of Warranty supersedes all others contained in this user guide.

3 Unpacking and checking

All Void Acoustics products are carefully manufactured and thoroughly tested before being dispatched. Your dealer will ensure that your Void products are in pristine condition before being forwarded to you but mistakes and accidents can happen.

Before signing for your delivery:

- Inspect your shipment for any signs of contamination, abuse or transit damage as soon as you receive it
- Check your Void Acoustics delivery fully against your order
- If your shipment is incomplete or any of its contents are found to be damaged; inform the shipping company and inform your dealer.

When you are removing your Venu loudspeaker from its original packaging:

- All Venu loudspeakers come double boxed and each box is stapled shut; take care when unboxing and removing the staples to avoid injury or damage to the loudspeaker
- If you need to place the Venu loudspeaker on a flat surface ensure you use a lint free product to protect the finish
- When you have removed the Venu loudspeaker from the packaging inspect it to ensure there is no damage and keep all original packaging in case it needs to be returned for any reason.

See section 2 for warranty conditions and see section 8 if your product needs servicing.

4 About

4.1 Welcome

Many thanks for purchasing this Void Acoustics Venu Series loudspeaker. We truly appreciate your support. At Void, we design, manufacture and distribute advanced professional audio systems for the installed and live sound market sectors. Like all Void products, our highly skilled and experienced engineers have successfully combined pioneering technologies with groundbreaking design aesthetics, to bring you superior sound quality and visual innovation. In buying this product, you are now part of the Void family and we hope using it brings you years of satisfaction. This guide will help you both use this product safely and ensure it performs to its full capability.

4.2 Venu Series overview

The Venu Series has been created to provide everything expected from a range of loudspeakers moulded by the demands of leading installation contractors and integrators around the world. The Venu series is so convenient to install and use – with the Easy Hang wall bracket that supports the enclosure either vertically or horizontally and requires only one set of hands to attach the enclosure to the bracket; a Phoenix connector with link outs for super quick and reliable hook ups; and a rotatable high frequency horn that allows the correct dispersion to be maintained in vertical or horizontal mounting positions. Multiple flying points and rust-proof grille and fittings make Venu the ideal solution for beach bars and other potentially corrosive environments.

Passive two-way surface mount loudspeakers:

- Venu 6
- Venu 8
- Venu 10
- Venu 12

Reflex-loaded low frequency loudspeakers:

- Venu Bass
- Venu X
- Venu 115
- Venu 215

Compact bandpass-loaded low frequency enclosure:

- Venu Sub

5 Cabling and wiring

5.1 Electrical safety

To avoid electrical hazards please note the following:

- Do not access the inside of any electrical equipment. Refer servicing to Void-approved service agents.

5.2 Cable considerations for fixed installations

We recommend specifying installation-grade Low Smoke Zero Halogen (LSZH) cables for permanent installations. The cables should use Oxygen Free Copper (OFC) of grade C11000 or above. Cables for permanent installations should be compliant with the following standards:

- IEC 60332.1 Fire retardancy of a single cable
- IEC 60332.3C Fire retardancy of bunched cables
- IEC 60754.1 Amount of Halogen Gas Emissions
- IEC 60754.2 Degree of acidity of released gases
- IEC 61034.2 Measurement of smoke density.

We suggest using the following maximum copper cable lengths to keep level losses below 0.6 dB.

Metric mm^2	Imperial AWG	8 Ω load	4 Ω load	2 Ω load
2.50 mm^2	13 AWG	36 m	18 m	9 m
4.00 mm^2	11 AWG	60 m	30 m	15 m

5.3 Phoenix connector

Figure 5.1 shows the rear panel of a Venu Series loudspeaker with the polarity of the Phoenix connector labelled. From left to right it is - and + for the feed to the drivers and the - and + for the link/out.

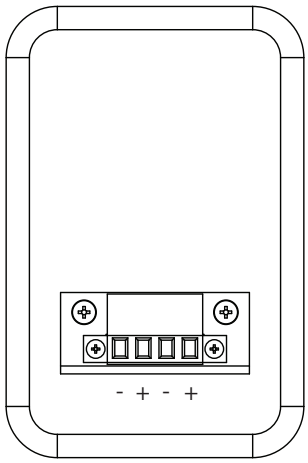


Figure 5.1: Phoenix connector polarity

5 Cabling and wiring

5.4 Venu 6, 8, 10 and 12 wiring

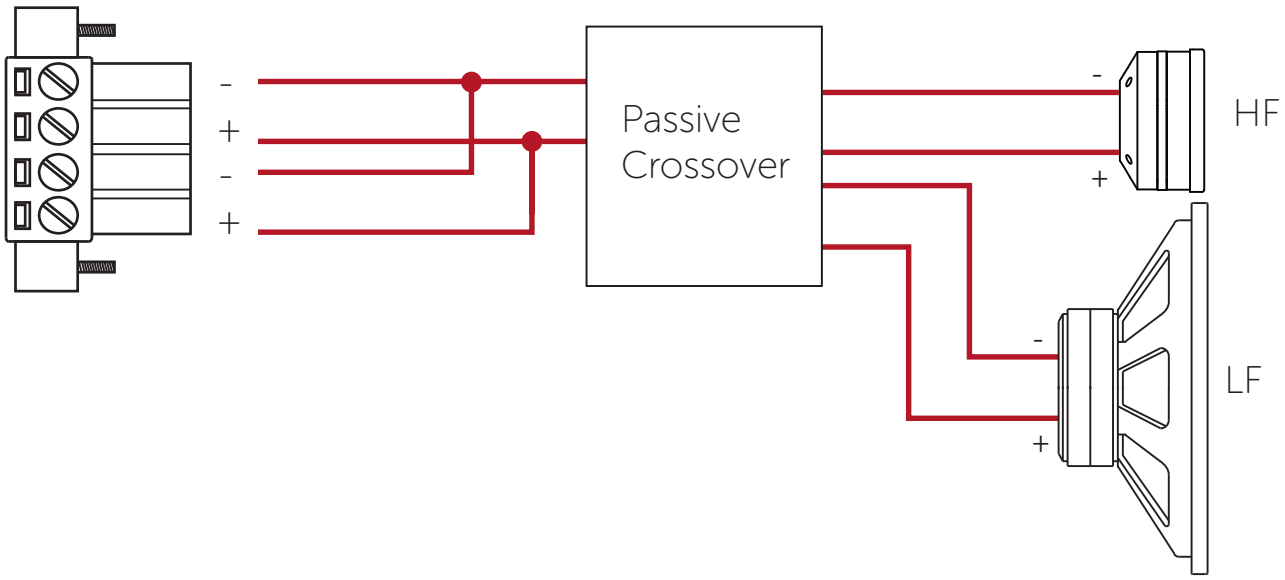


Figure 5.2: High frequency loudspeaker wiring diagram

	Phoenix pins 1+/1-	Phoenix pins 2+/2-
Venu 6	1" HF and 6.5" LF	Link/out
Venu 8	1" HF and 8" LF	Link/out
Venu 10	1" HF and 10" LF	Link/out
Venu 12	1" HF and 12" LF	Link/out

5 Cabling and wiring

5.5 Venu 6, 8, 10 and 12 amplifier wiring

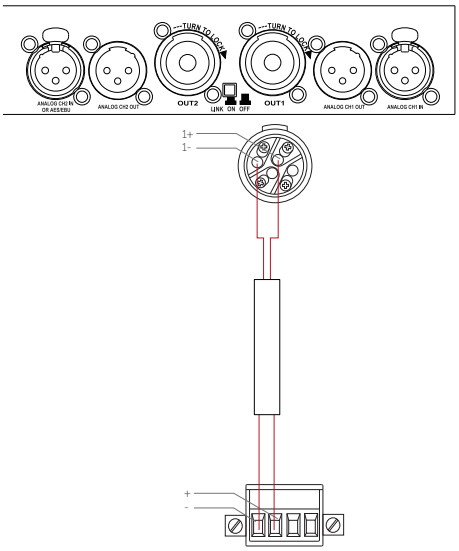


Figure 5.3: Bias V3 Phoenix/speakON™ wiring

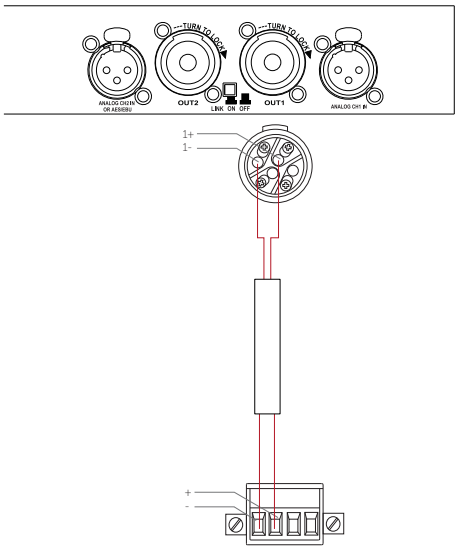


Figure 5.4: Bias V9 Phoenix/speakON™ wiring

Bias V3/V9	Output 1
Output	HF and LF
Max parallel units	4 (2 Ω load to amplifier)

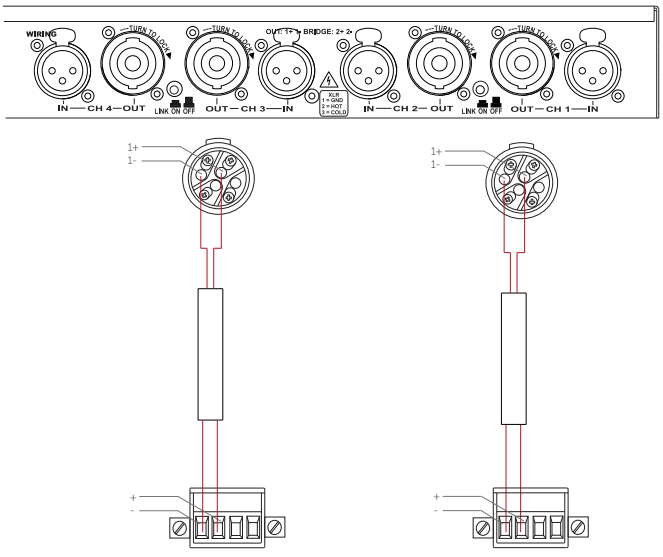


Figure 5.5: Bias VQ Phoenix/speakON™ wiring

Bias VQ	Output 1	Output 3
Output	Left HF and LF	Right HF and LF
Max quantity per channel	2 (4 Ω load to amplifier)	2 (4 Ω load to amplifier)

5 Cabling and wiring

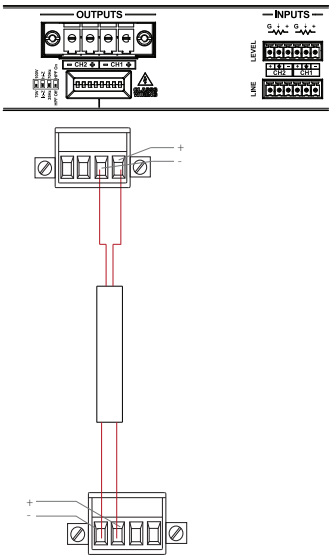


Figure 5.6: Bias D1 Phoenix wiring

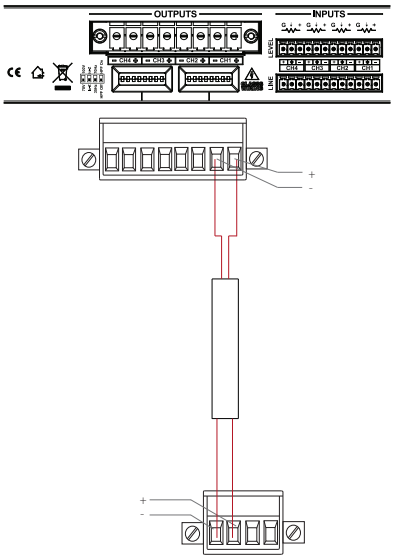


Figure 5.7: Bias Q2 Phoenix wiring

Bias D1/Q2	Output 1
Output	HF and LF
Max parallel units	4 (2 Ω load to amplifier)

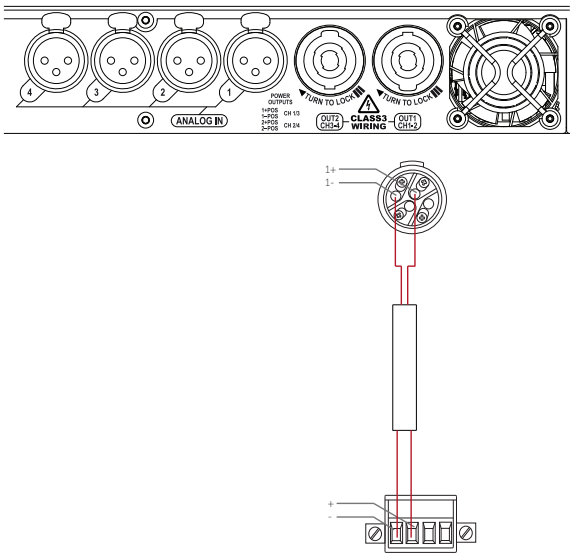


Figure 5.8: Bias Q5 Phoenix/speakON™ wiring

Bias Q5	Output 1
Output	HF and LF
Max quantity per channel	4 (2 Ω load to amplifier)

5 Cabling and wiring

5.6 Venu Bass and 115 wiring

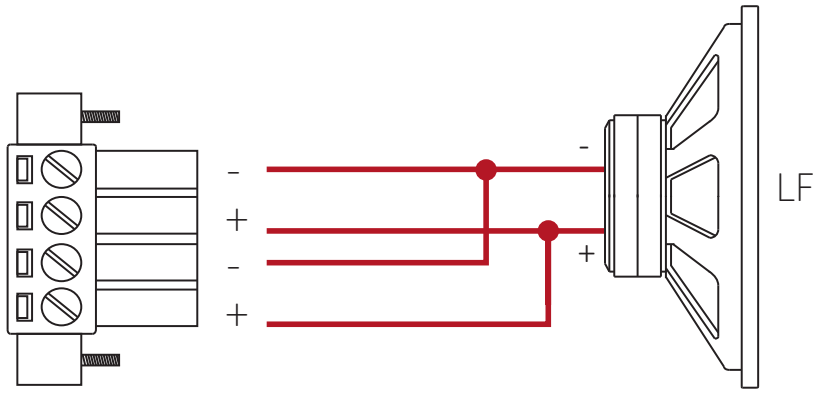


Figure 5.9: Single low frequency loudspeaker wiring diagram

	Phoenix pins 1+/1-	Phoenix pins 2+/2-
Venu Bass	12" LF	Link/out
Venu 115	15" LF	Link/out

5.7 Venu Bass and 115 amplifier wiring

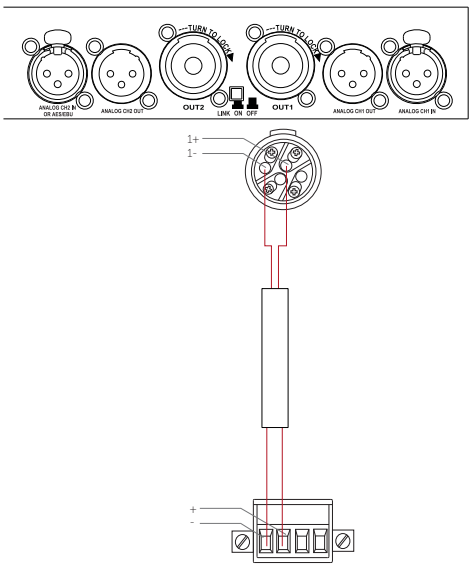


Figure 5.10: Bias V3 Phoenix/speakON™ wiring

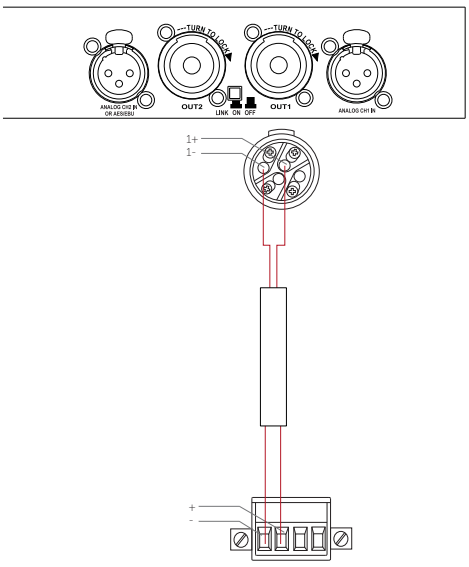


Figure 5.11: Bias V9 Phoenix/speakON™ wiring

Bias V3/V9	Output 1
Output	LF
Max parallel units	4 (2 Ω load to amplifier)

5 Cabling and wiring

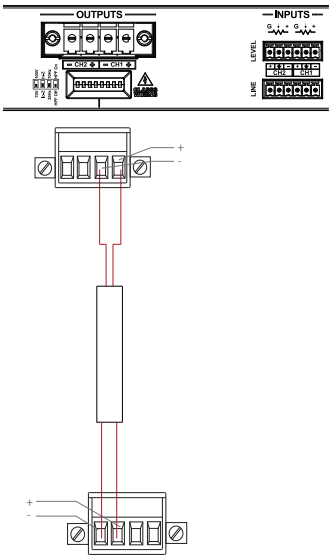


Figure 5.12: Bias D1 Phoenix wiring

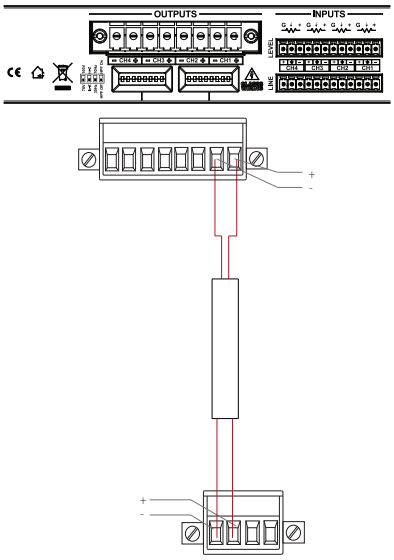


Figure 5.13: Bias Q2 Phoenix wiring

Bias D1/Q2	Output 1
Output	LF
Max parallel units	4 (2 Ω load to amplifier)

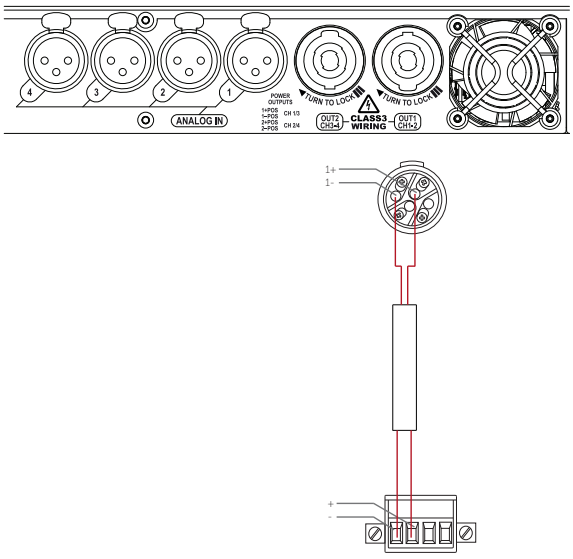


Figure 5.14: Bias Q5 Phoenix/speakON™ wiring

Bias Q5	Output 1
Output	LF
Max quantity per channel	4 (2 Ω load to amplifier)

5 Cabling and wiring

5.8 Venu X and 215 wiring

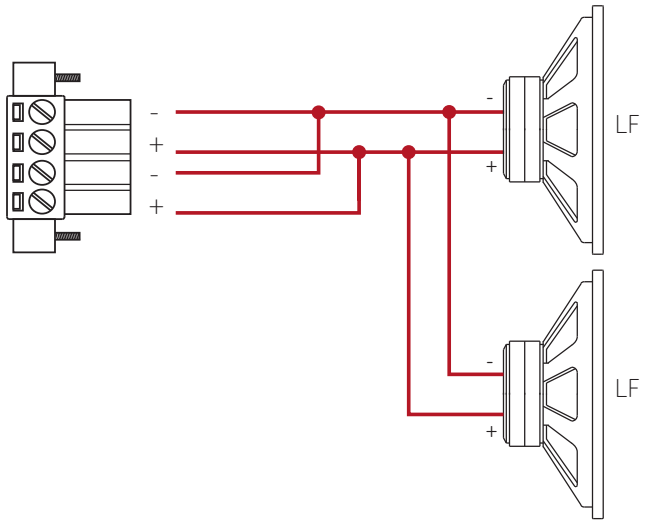


Figure 5.15: Dual low frequency loudspeaker wiring diagram

	Phoenix pins 1+/1-	Phoenix pins 2+/2-
Venu X	2 x 12" LF	Link/out
Venu 215	2 x 15" LF	Link/out

5.9 Venu X and 215 amplifier wiring

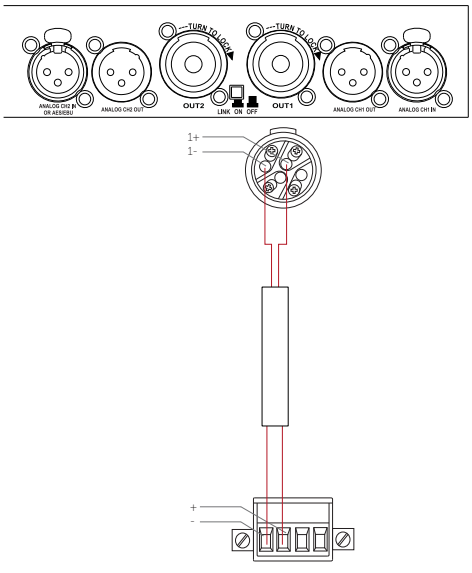


Figure 5.16: Bias V3 Phoenix/speakON™ wiring

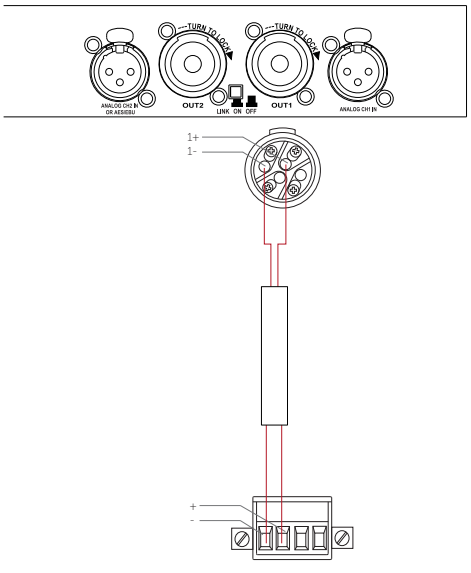


Figure 5.17: Bias V9 Phoenix/speakON™ wiring

Bias V3/V9	Output 1
Output	LF
Max parallel units	2 (2 Ω load to amplifier)

5 Cabling and wiring

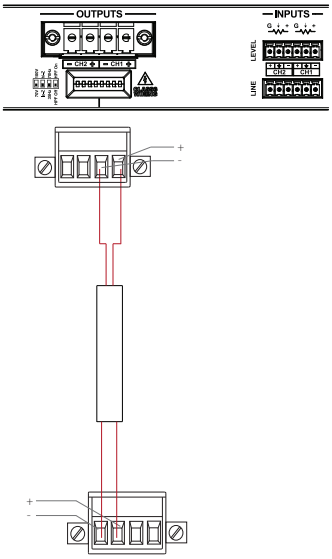


Figure 5.18: Bias D1 Phoenix wiring

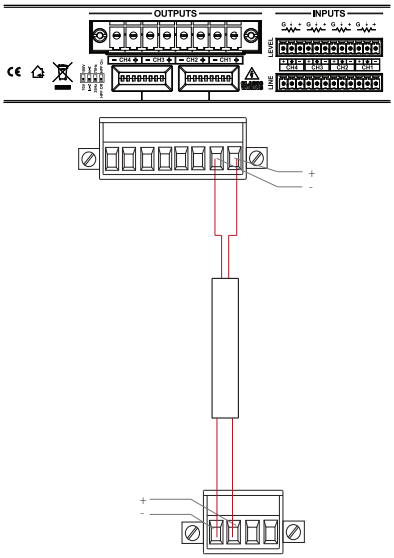


Figure 5.19: Bias Q2 Phoenix wiring

Bias D1/Q2	Output 1
Output	LF
Max parallel units	2 (2 Ω load to amplifier)

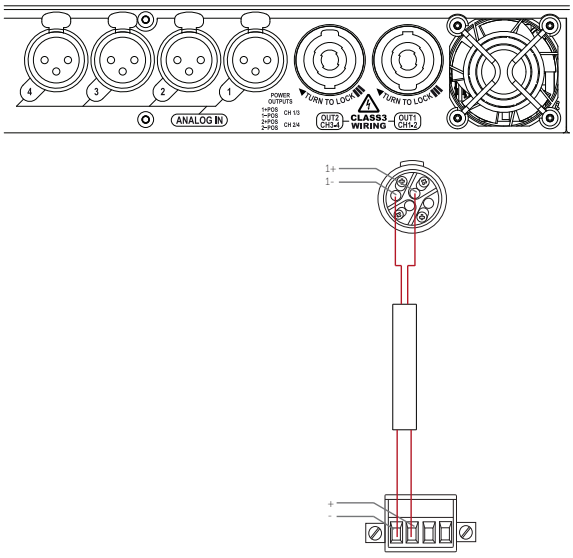


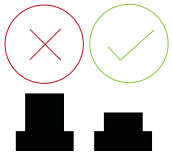
Figure 5.20: Bias Q5 Phoenix/speakON™ wiring

Bias Q5	Output 1
Output	LF
Max quantity per channel	2 (2 Ω load to amplifier)

5 Cabling and wiring

5.10 Venu Sub passive mode wiring

For the Venu Sub to work in passive mode the passive/active mode switch on the rear of the enclosure must be set to its in position. The Venu Sub comes factory set to work in passive mode. The switch can be found just below and between the link/out A and B speakON™ connectors.



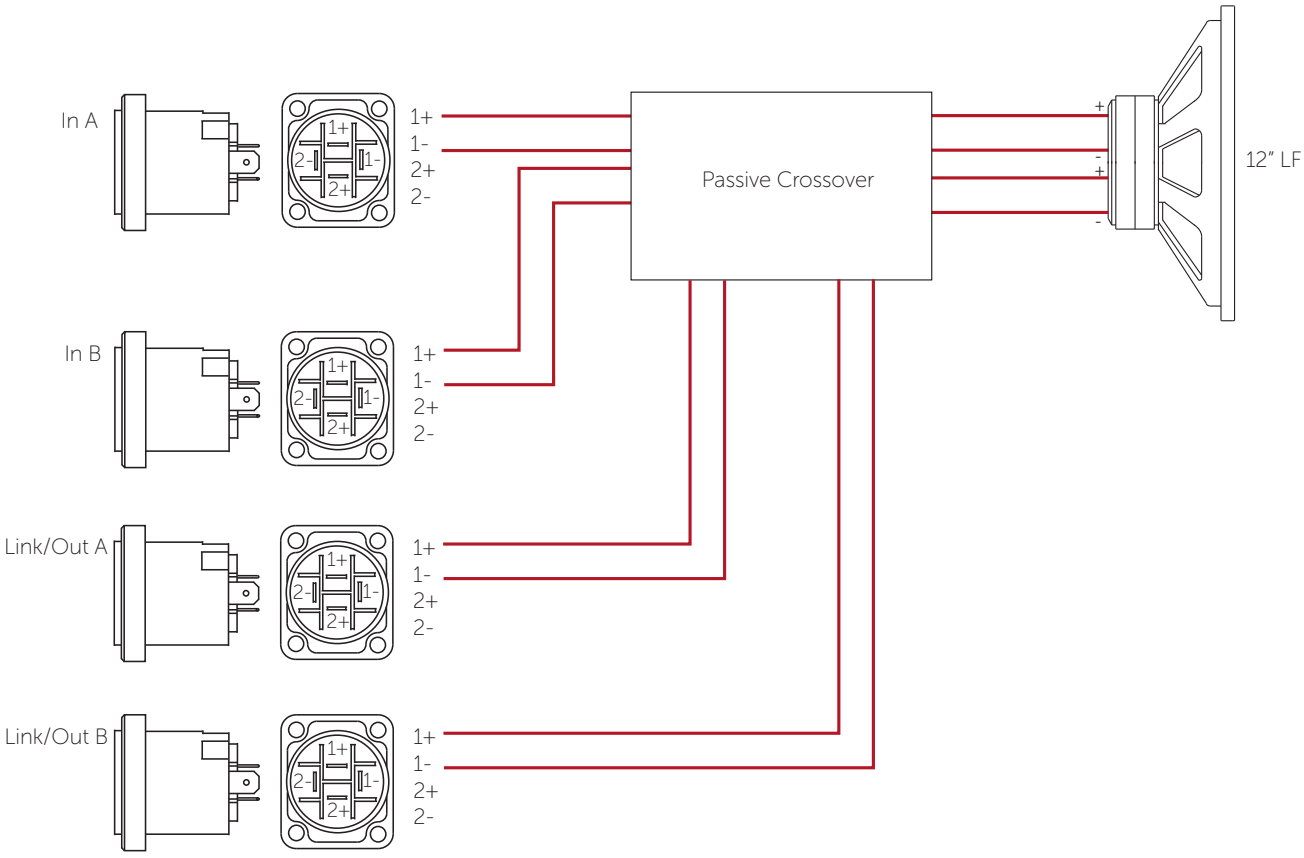


Figure 5.21: Passive mode wiring diagram

Passive mode		
	speakON™ pins 1+/1-	speakON™ pins 2+/2-
In A	Voice coil 1 on 12" LF	n/c
In B	Voice coil 2 on 12" LF	n/c
Link/out A	Link	n/c
Link/out B	Link	n/c

5 Cabling and wiring

5.11 Venu Sub passive mode amplifier wiring

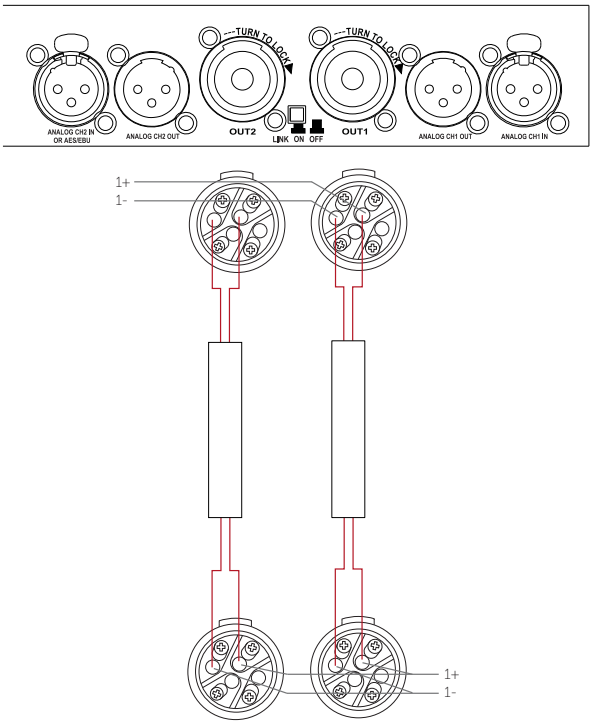


Figure 5.22: Bias V3 speakON™ wiring

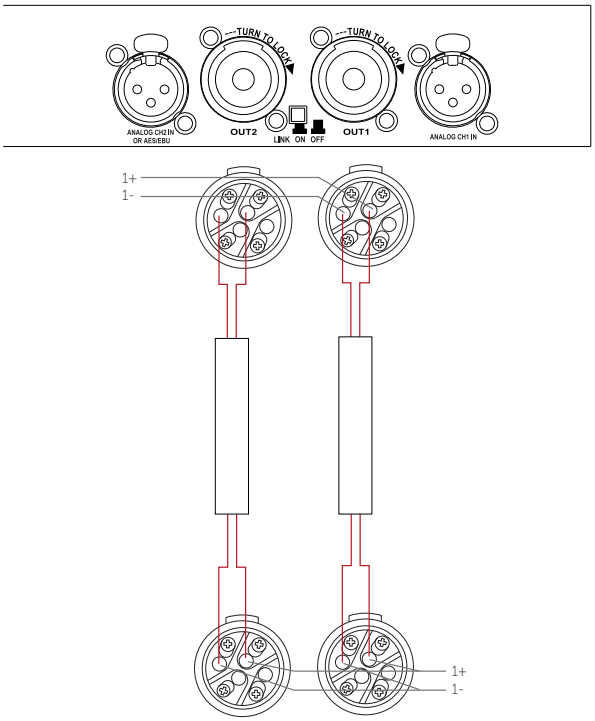


Figure 5.23: Bias V9 speakON™ wiring

Bias V3/V9	Output 1	Output 2
Output	12″ LF voice coil 1	12″ LF voice coil 2

5 Cabling and wiring

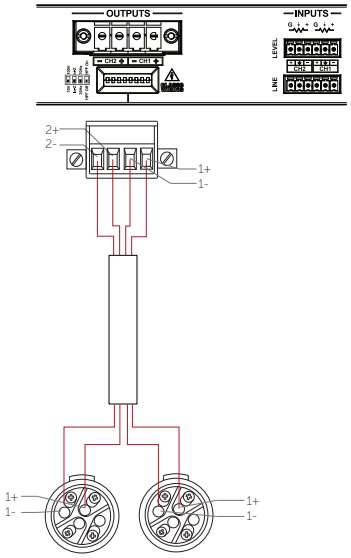


Figure 5.24: Bias D1 Phoenix wiring

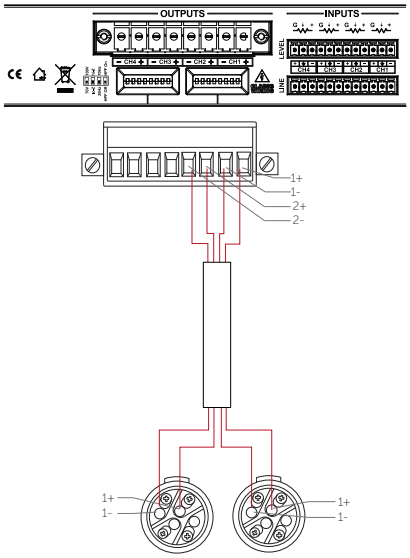


Figure 5.25: Bias Q2 Phoenix wiring

Bias D1/Q2	Output 1	Output 2
Output	12″ LF voice coil 1	12″ LF voice coil 2

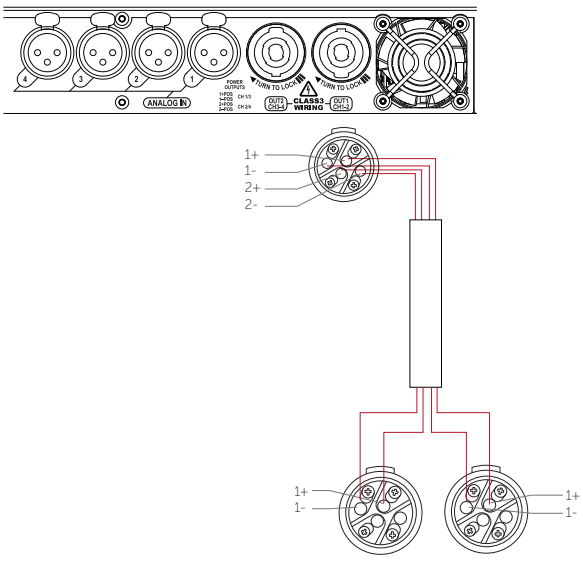


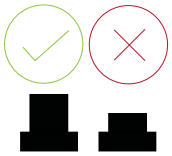
Figure 5.26: Bias Q5 Phoenix/speakON™ wiring

Bias Q5	Output 1	Output 2
Output	12″ LF voice coil 1	12″ LF voice coil 2

5 Cabling and wiring

5.12 Venu Sub active mode wiring

In active mode the internal passive low pass filter is bypassed, so you will have to power the Venu Sub via an external active crossover. Set the active crossovers hi pass filter to 35 Hz and its low pass filter to 150 Hz. For optimum results use either 18 or 24 dB per octave slopes on both hi and low pass filters.



Next locate the passive/active mode switch on the rear connector panel on the Venu Sub. The switch can be found just below and between the link/out A and B speakON™ connectors. Use a small screw driver or other pointed object and press the switch so that it is in its out position. The Venu Sub is now ready to work in active mode. This can be confirmed by looking at the mode switch which should now be protruding from the rear panel. Please note that the switch is factory set to passive mode.

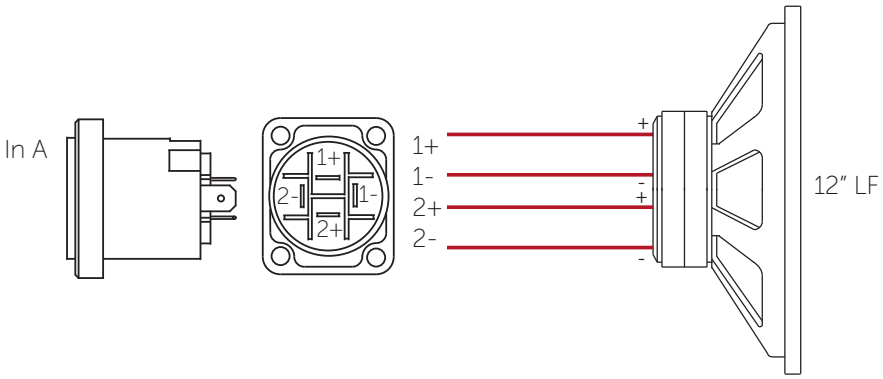


Figure 5.27: Active mode wiring diagram

Passive mode		
	speakON™ pins 1+/1-	speakON™ pins 2+/2-
In A	Voice coil 1 on 12" LF	Voice coil 2 on 12" LF

5 Cabling and wiring

5.13 Venu Sub active mode amplifier wiring

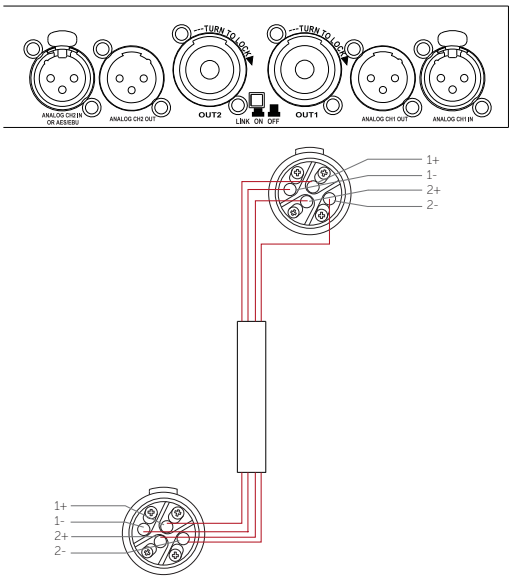


Figure 5.28: Bias V3 speakON™ wiring

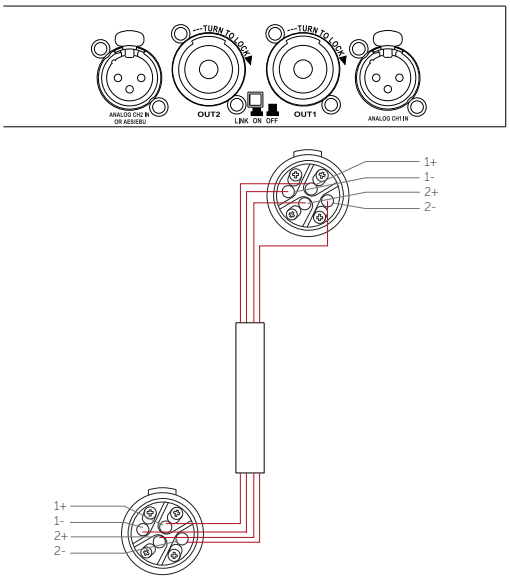


Figure 5.29: Bias V9 speakON™ wiring

Bias V3/V9	Output 1
Output	12" LF voice coil 1 and 2

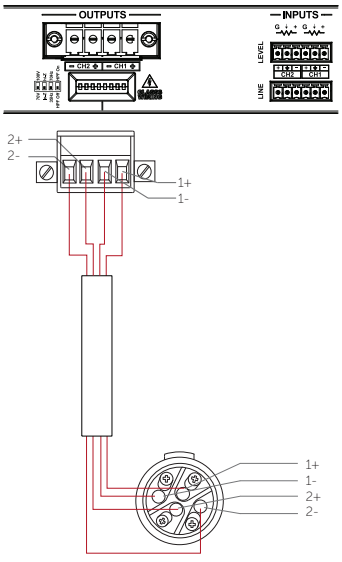


Figure 5.30: Bias D1 Phoenix/speakON™ wiring

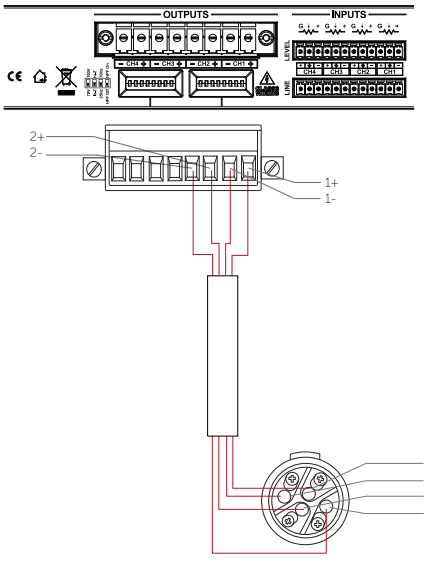


Figure 5.31: Bias Q2 Phoenix/speakON™ wiring

Bias D1/Q2	Output 1
Output	12" LF voice coil 1 and 2

5 Cabling and wiring

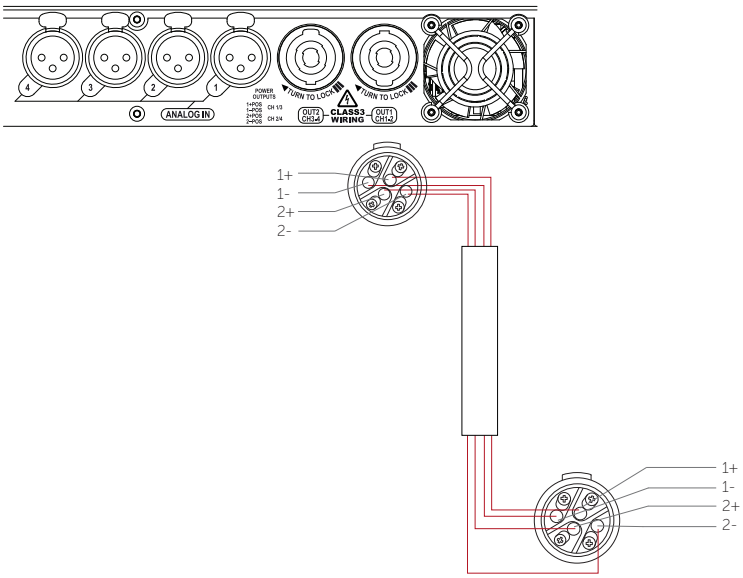


Figure 5.32: Bias Q5 Phoenix/speakON™ wiring

Bias Q5	Output 1
Output	12" LF voice coil 1 and 2

6 System design

6.1 System design principles

Venu loudspeakers can be arrayed as a single pair facing forward to provide a wide stereo image.

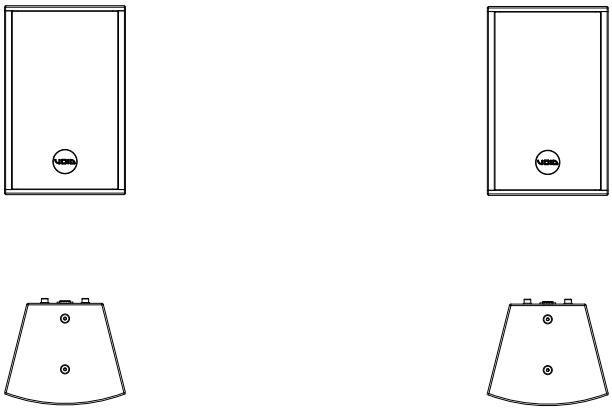


Figure 6.1: Venu Series loudspeakers single pair arrangement

For applications requiring wide horizontal coverage, use two Venu Series loudspeakers in pairs, angled at about 40°.

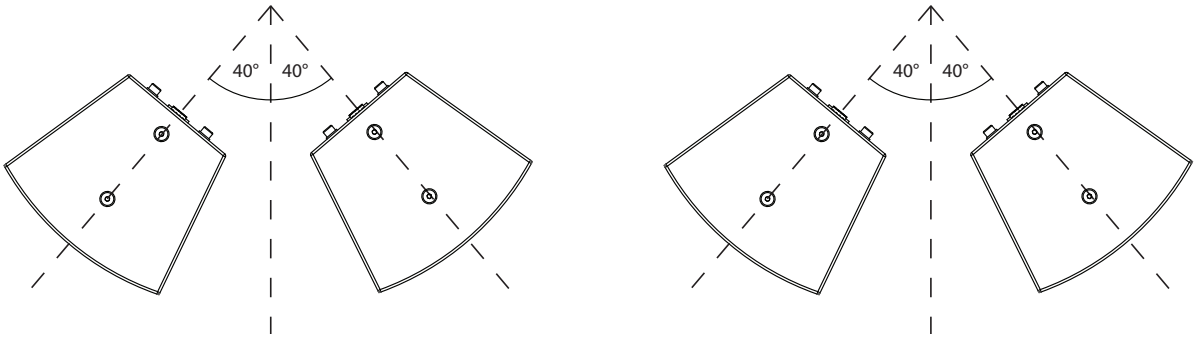


Figure 6.2: Venu Series loudspeaker dual pair arrangement

For permanent installation, it is recommended to fly Venu loudspeakers for more even coverage. This also allows co-located low frequency enclosures in a single block, increasing sensitivity and providing more consistent bass coverage.

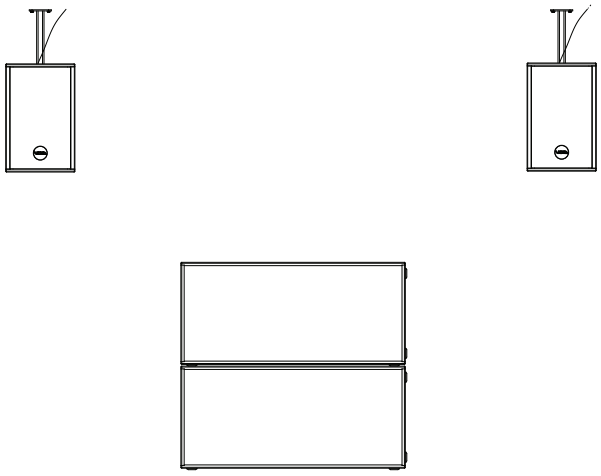


Figure 6.3: Venu ceiling mounting

6.2 High frequency loudspeaker placement and positioning

When deploying Venu loudspeakers, it is important to consider the speakers' vertical position to maximise coverage in the vertical axis. Horizontal loudspeaker dispersion figures dictate the coverage of the loudspeaker, left to right, to the -3 dB points. The same can be said for the vertical dispersion figure, but when applied to a listening area, this figure dictates the audience area coverage front to back.

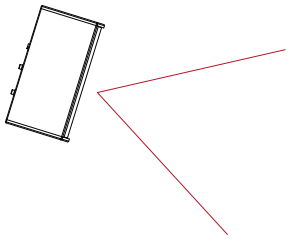


Figure 6.4a: Vertical dispersion (side view)

Vertical dispersion is often overlooked or not assessed properly, resulting in inefficiently deployed loudspeaker systems that require more fill loudspeakers than are necessary to achieve required coverage. Following are some basic guidelines when considering the vertical position of your Venu loudspeaker.

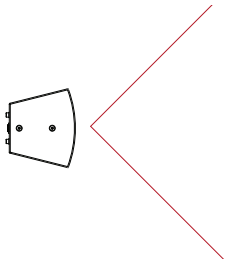


Figure 6.4b: Horizontal dispersion (top view)

With optimum vertical positioning and aiming applied the loudspeaker system can be used at maximum efficiency. With a point source loudspeaker in this configuration the speaker is placed 2m-4m from the ground, aimed half way to two thirds of the way back from the audience area, as shown in figure 6.5. The applied aiming reduces unwanted reflections from the ceiling and directs the highest energy concentration to the audience area requiring it most. This is the most desirable position for the loudspeakers in this example.

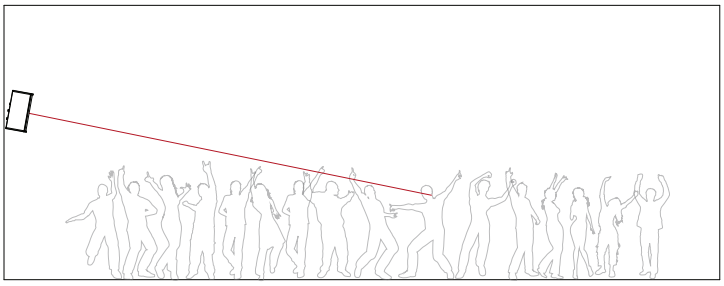


Figure 6.5: Correct loudspeaker placement

6 System design

A multi-point loudspeaker system in a club/bar environment can be very pleasing for the listener. However, it's important that the processes applied to previous examples are still implemented. In figure 6.6 you can see the loudspeakers have been positioned and aimed optimally. When deploying a multi-point loudspeaker system, extra consideration must be taken to counter unwanted room effects. Careful positioning and aiming of loudspeakers will minimise room effects, while maintaining even coverage throughout the audience area.

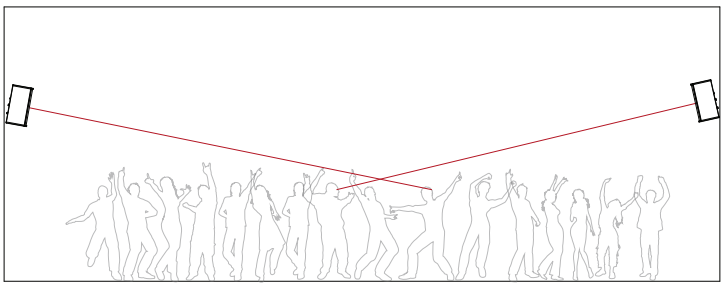


Figure 6.6: Multi point loudspeaker arrangement

In the horizontal plane rotate the Venu Series loudspeakers toward the audience area at an angle such that the centre line of the dispersion from each loudspeaker meets about two thirds of the way towards the rear of the audience area. This will help provide a wider coverage and result in more of the power being used usefully.

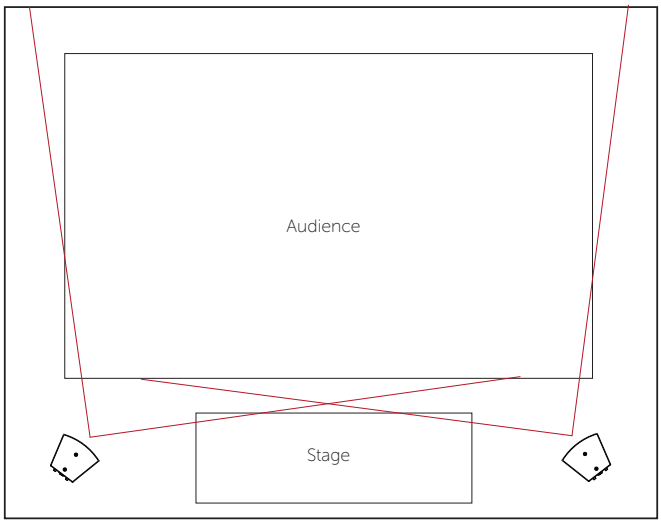


Figure 6.7: Correct horizontal dispersion

Avoid directing the Venu Series loudspeaker straight forward. This will result in a proportion of the power being directed towards the walls, creating possible reflective issues, as well as causing a gap in coverage at the centre of the audience area.

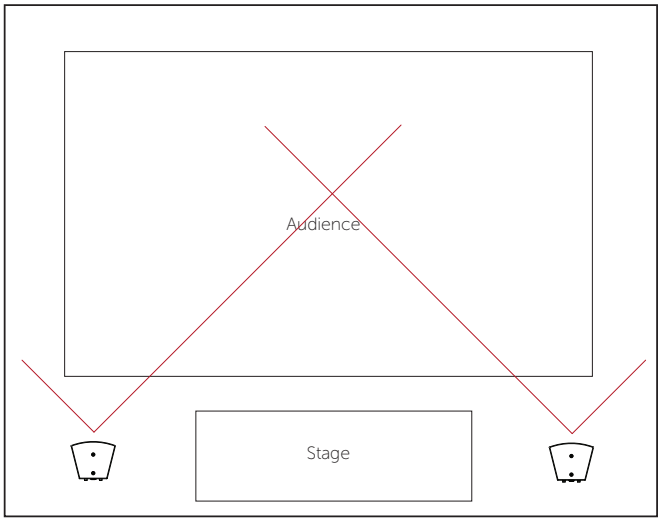


Figure 6.8: Incorrect horizontal dispersion

In figure 6.9 the loudspeakers vertical positioning is too low for the audience area. Mid and high range frequencies are absorbed by the first two rows of people, resulting in poor coverage and potential acoustic issues from room reflections.

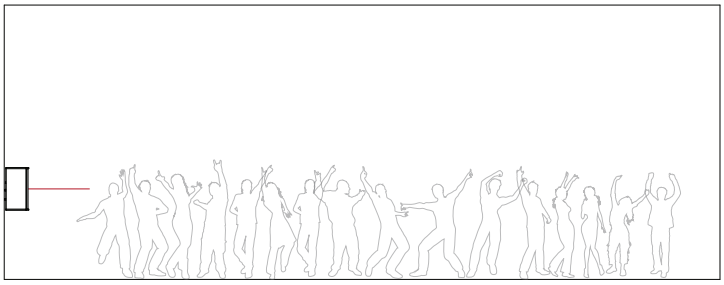


Figure 6.9: Incorrect loudspeaker placement

Figure 6.10 shows the loudspeaker vertical position is optimal for the audience area but the user hasn't applied an aiming angle. In this case, a large portion of energy is directed at the ceiling that could result in reduced intelligibility and unwanted room acoustic characteristics. The shallow angle of attack will also induce refraction issues on a hot dance floor, leading to reduced HF penetration at mid and far distances, again reducing intelligibility and coherence.

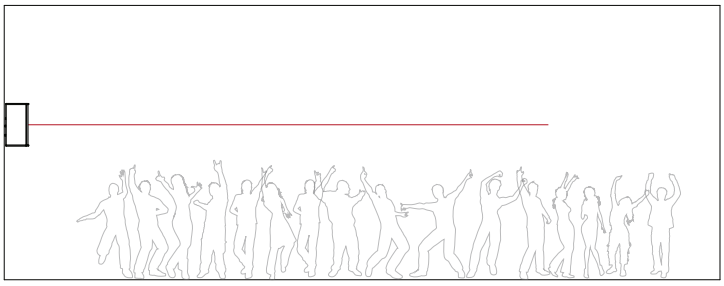


Figure 6.10: Incorrect loudspeaker placement

6.3 Typical operating modes for low frequency enclosures

Although the modes of arrangement shown here are typical operating modes for low frequency enclosures, the Venu Series low frequency enclosures design lends itself to wide range of configurations. Simple planer arrays and stacks to directional and steerable arrays are possible given suitable electronics and presets. Contact your local Void distributor/dealer for more information.

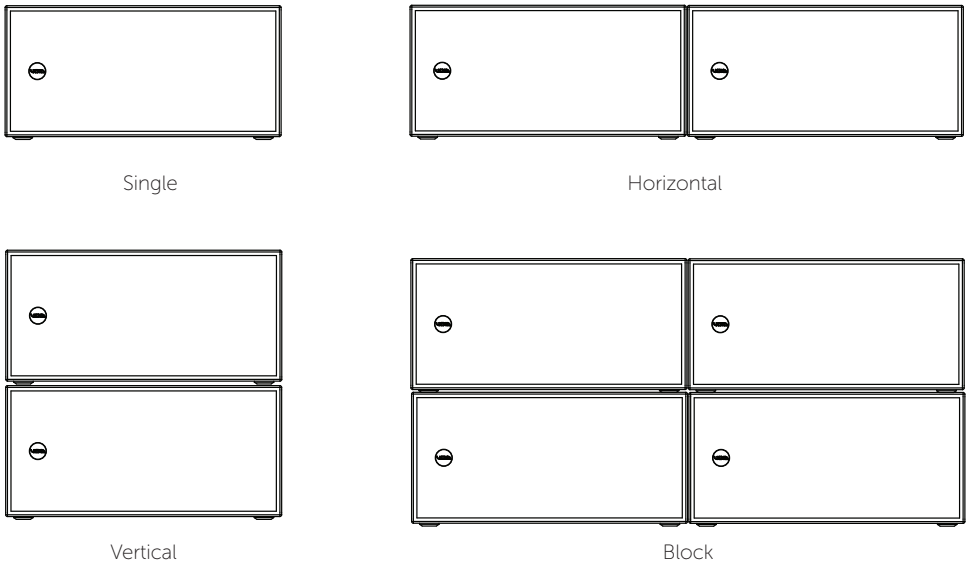


Figure 6.11: Typical mode layouts

6.4 Bass alignment - delay times

Note: All information given here is a guide and not a rule. Taking measurement on site and using your ear are still the most reliable way to achieve the best results.

When designing loudspeakers and low frequency enclosures layout within a space it is often necessary to apply delay to optimise system performance. In figure 6.12 we have a room with four Venu loudspeakers and single low frequency enclosure.

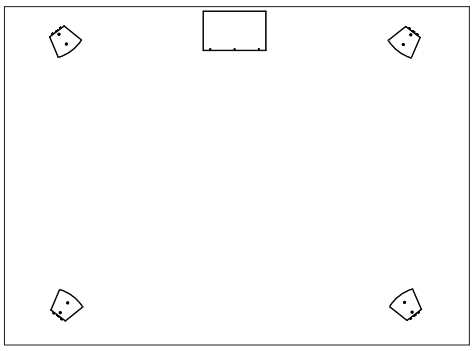


Figure 6.12: Bass alignment example 1

All four loudspeakers sit on a circle of radius R with its centre point at O. The low frequency enclosure is situated at a distance A from the origin and a distance B from the circumference of the circle. The distance B will determine the delay required for the low frequency enclosure of 2.9 ms per metre. So, in this example, if the distance B is 2 m the a delay of 5.8 ms would be required.

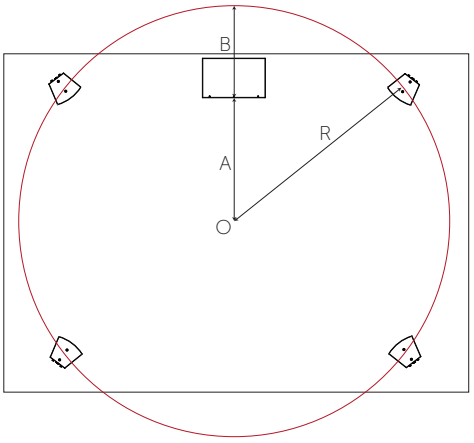


Figure 6.13: Bass alignment example 1

Figure 6.14 shows a second low frequency enclosure added. Here we are looking to create a secondary focal point at E. To calculate our delay time we take distance D, which is point E to the south edge of the circle, away from A, which is E to the north edge of the circle, and multiply by the delay time per metre. Or:

(A - D) x 2.9 ms/m = delay time.

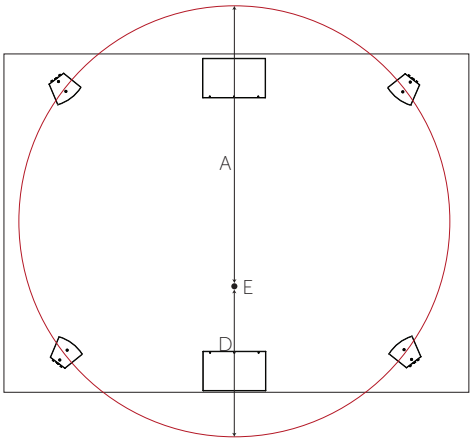


Figure 6.14: Bass alignment example 2

7 Mounting

Tools required

- 6 mm Allen key
- 13 mm spanner/wrench

7.1 Installation safety

To avoid mechanical hazards, please note the following:

- Safety regulations vary in different regions. Full compliance with those regulations must be your priority
- Rigging must only be undertaken by fully-qualified and experienced riggers who understand local regulations
- This may include consulting a structural engineer before installation of wall brackets
- Remember that all personnel have a duty of care to themselves, to their assistants, to the venue staff and to the public
- Before lifting any part of the system above head height, check the whole rig for loose tools or other items that may fall and cause injury
- Do not use a telephone (even if hands-free) while rigging. Always concentrate fully on the rigging operation
- Do not rig equipment that is worn, damaged, corroded, mishandled or over-stressed in any way
- Use only Void-approved mounting equipment and accessories

7.2 Mounting in portrait mode

Parts required:

- EZ hang wall mount bracket (Venu 6, 8)
- EZ hang XL wall mount bracket (Venu 10, 12)

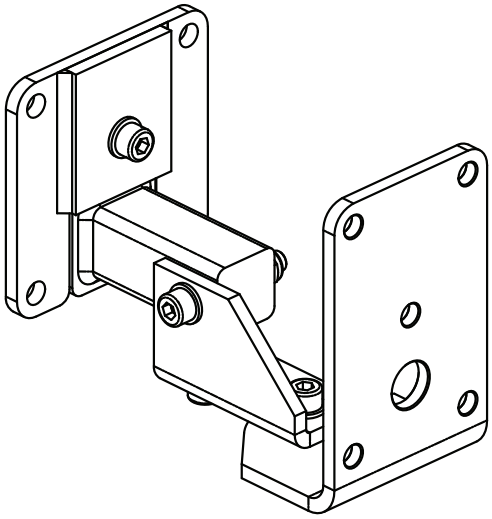


Figure 7.1: EZ hang wall mount bracket

Step 1:
Remove all four M8 bolts from the rear of the loudspeaker.

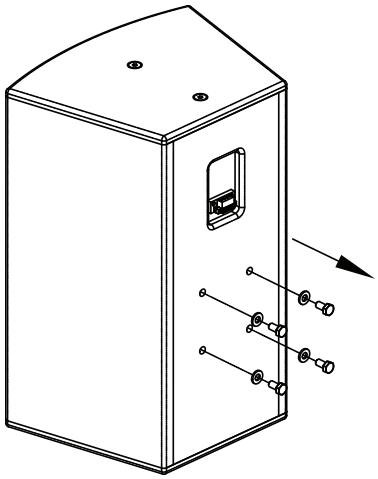


Figure 7.2: Venu bolt removal

Step 2:
Remove the front of the bracket from the main bracket assembly. Attach the rear of the bracket assembly to the wall making sure all 4 bolts are fitted.

Take care when mounting the bracket to the wall, making sure to use the correct fixing and that the wall can take the load, for example do not attach the bracket to a stud wall.

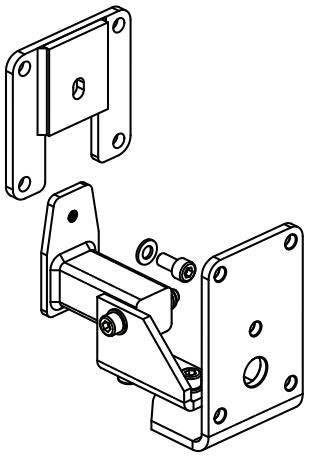


Figure 7.3: Deconstructing the bracket assembly

7.2 Mounting in portrait mode

Step 3:
Attach the front of the bracket assembly to the rear of the loudspeaker using all four M8 bolts.

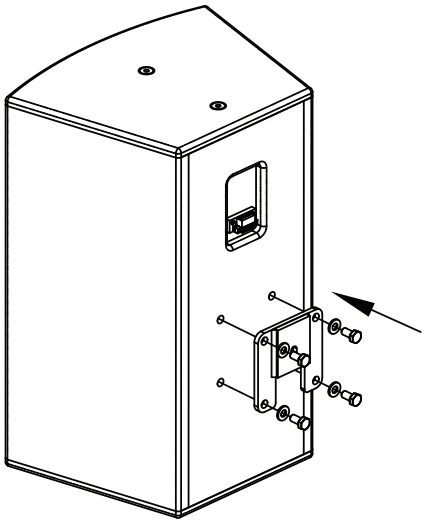


Figure 7.4: Attaching bracket to loudspeaker

Step 4:
Lower the speaker assembly on to the rear of the bracket assembly and fix the bolt into the rear of assembly.

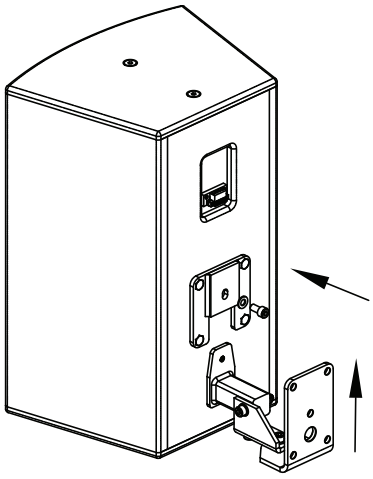


Figure 7.5: Attaching loudspeaker to bracket

Step 5:
Adjust the bracket in the horizontal axis by loosening the bolt at the rear of the assembly (figure 7.6a) and in the vertical axis by adjusting the bolt on the base of the assembly (figure 7.6b).

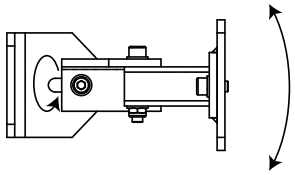


Figure 7.6a: Bracket adjustment

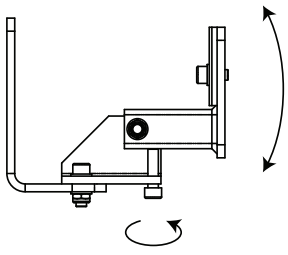


Figure 7.6b: Bracket adjustment

7.3 Mounting in landscape mode

Parts required:

- EZ hang wall mount bracket (Venu 6, 8)
- EZ hang XL wall mount bracket (Venu 10, 12)

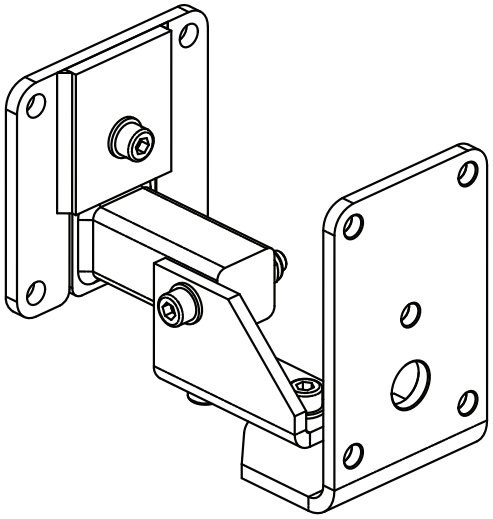


Figure 7.7: EZ hang wall mount bracket

Step 1:
After rotating the horn, as described in section 7.6, remove all four M8 bolts from the rear of the loudspeaker.

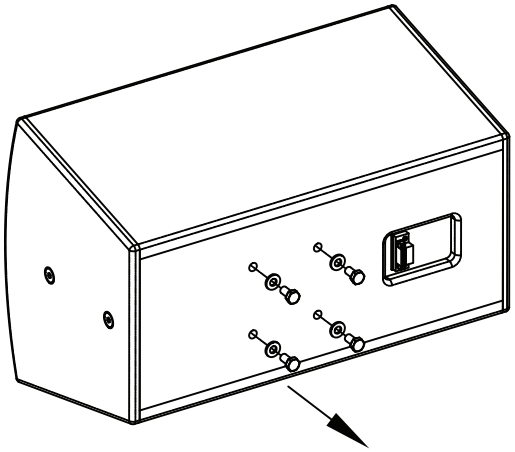


Figure 7.8: Venu bolt removal

Step 2:
Remove the front of the bracket from the main bracket assembly. Attach the rear of the bracket assembly to the wall making sure all 4 bolts are fitted.

Take care when mounting the bracket to the wall, making sure to use the correct fixing and that the wall can take the load, for example do not attach the bracket to a stud wall.

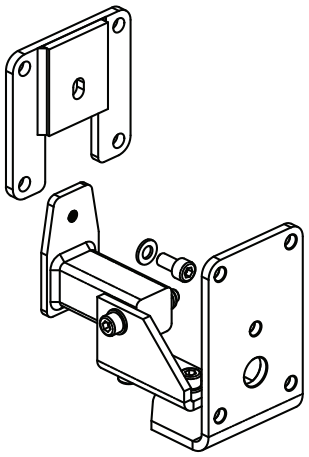


Figure 7.9: Deconstruting the bracket assembly

7.3 Mounting in landscape mode

Step 3:
Attach the front of the bracket assembly to the rear of the loudspeaker using all four M8 bolts.

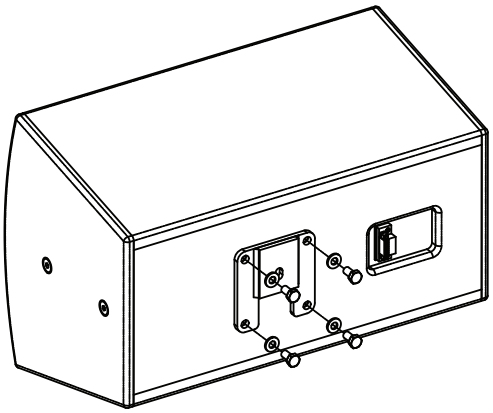


Figure 7.10: Attaching bracket to loudspeaker

Step 4:
Lower the speaker assembly on to the rear of the bracket assembly and adjust the bracket so that loudspeaker is in the required position.

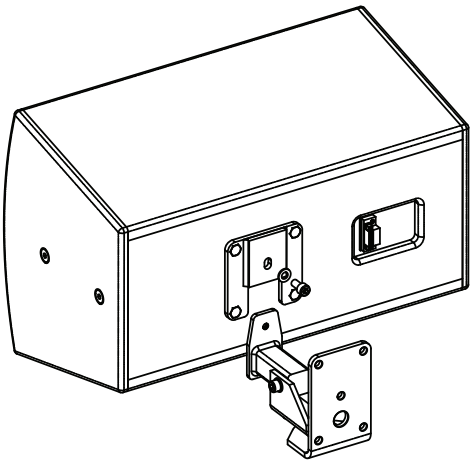


Figure 7.11: Loudspeaker positioning

Step 5:
Adjust the bracket in the horizontal axis by loosening the bolt at the rear of the assembly (figure 7.12a) and in the vertical axis by adjusting the bolt on the base of the assembly (figure 7.12b).

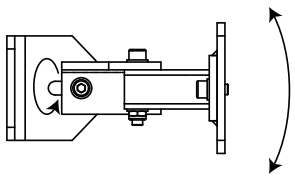


Figure 7.12a: Bracket adjustment

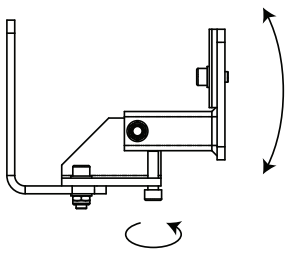


Figure 7.12b: Bracket adjustment

7.4 Ceiling mount

Parts required:

- Venu Series Ceiling Mount Bracket

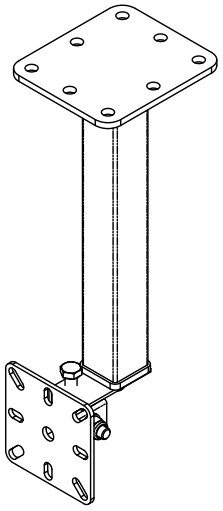


Figure 7.13: Venu Series Ceiling Mount Bracket

Step 1:
Remove all four M8 bolts from the rear of the loudspeaker.

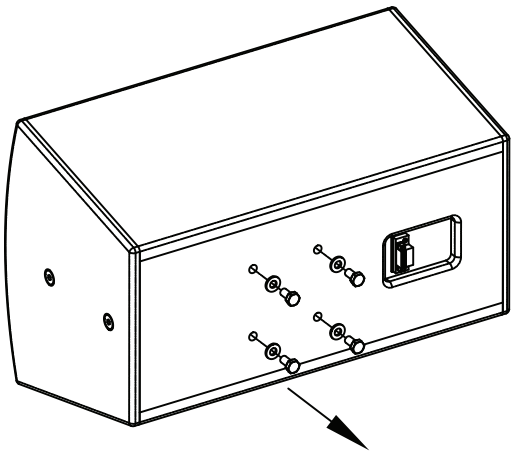


Figure 7.14: Venu bolt removal

Step 2:
Lift the loudspeaker into position and attach all four M8 bolts.

Take care when mounting the bracket to the ceiling, making sure to use the correct fixing and that the ceiling can take the load, for example do not attach the bracket to a suspended ceiling.

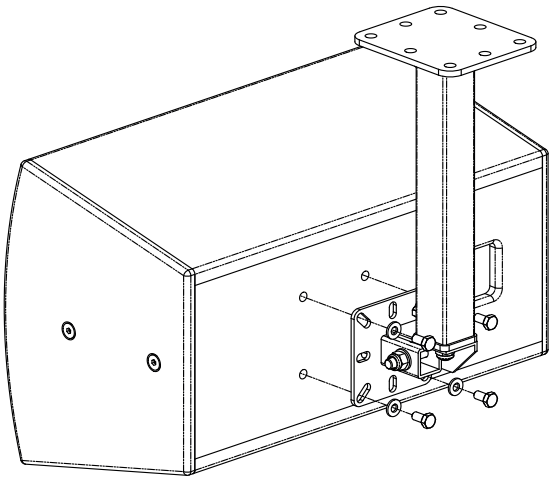


Figure 7.15: Fixing bracket

7.4 Ceiling mount

Step 3:
With the lifting gear in place adjust the angle of the bracket using the bolt on the bracket assembly.

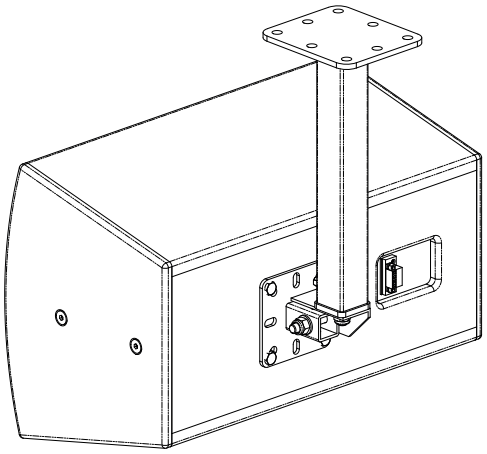


Figure 7.16: Attaching bracket to loudspeaker

Step 4:
Tighten the bolt on the bracket to fix the loudspeaker in position.

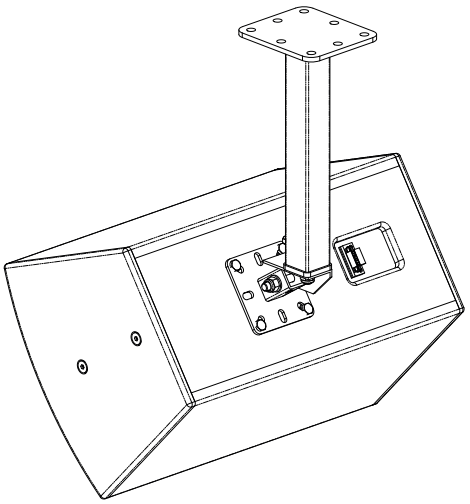


Figure 7.17: Loudspeaker positioning

7.5 Yoke bracket mounting

Parts required:

- Venu series yoke bracket (Venu 8, 10, 12)

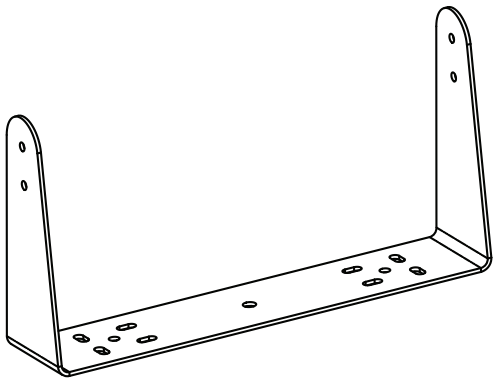


Figure 7.18: Venu series yoke bracket

Step 1:
Begin by fixing the yoke by the central bolt hole and adjusting the position until the yoke is in the required position.

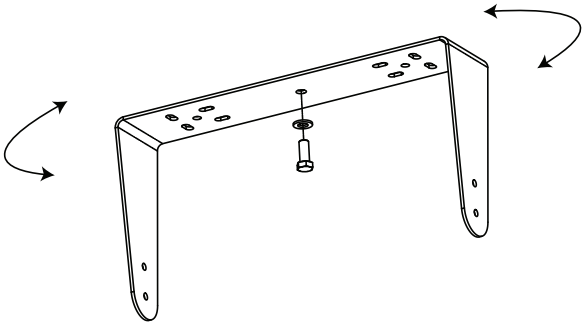


Figure 7.19: Yoke adjustment

Step 2:
Fix the yoke into position by fitting the remaining bolts.

Take care when mounting the yoke to the wall/ceiling, making sure to use the correct fixing and that it can take the load, for example do not attach the yoke to a stud wall.

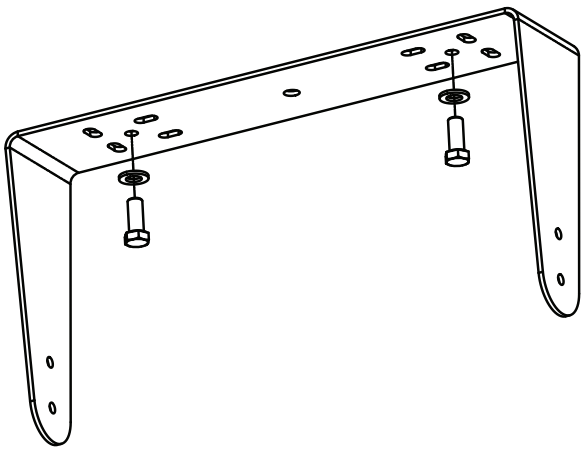


Figure 7.20: Yoke fixing

7.5 Yoke bracket mounting

Step 3:
Remove the countersunk M8 bolts from the top and bottom of the loudspeaker.

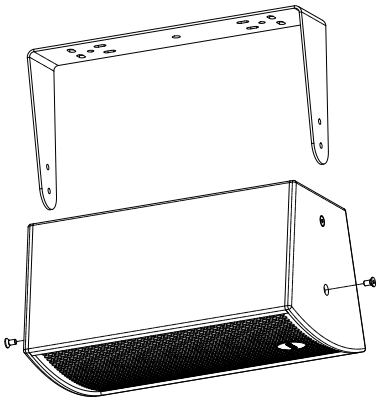


Figure 7.21: Venu series yoke bracket

Step 4:
Lift the loudspeaker into position. Do NOT use the countersunk M8 bolts from the Venu loudspeaker but instead use the M8 bolts supplied with the yoke bracket. Fit the M8 bolts but do not tighten.

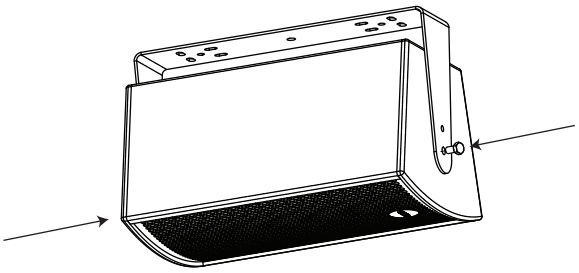


Figure 7.22: Loudspeaker fitting

Step 5:
Rotate the loudspeaker into position and then tighten the bolts.

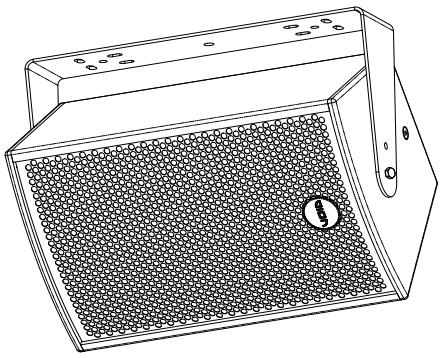


Figure 7.23: Loudspeaker positioning

7.6 Horn rotation

Step 1:
Attach cable ties to two positions on the grill as shown.

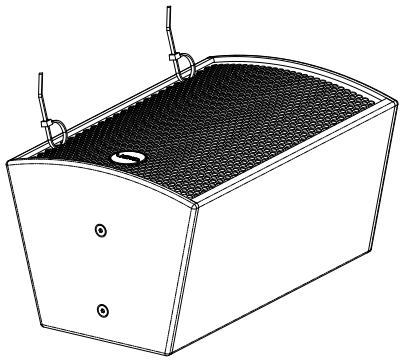


Figure 7.24: Fitting cable ties

Step 2:
Pull the cable ties toward the opposite edge of the loudspeaker and then pull up and away to expose the enclosure.

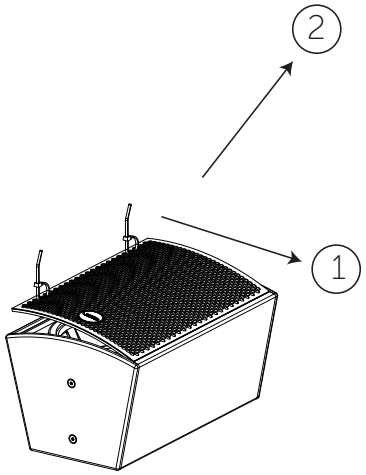


Figure 7.25: Grill removal

Step 3:
With the grill removed undo all four screws from the horn.

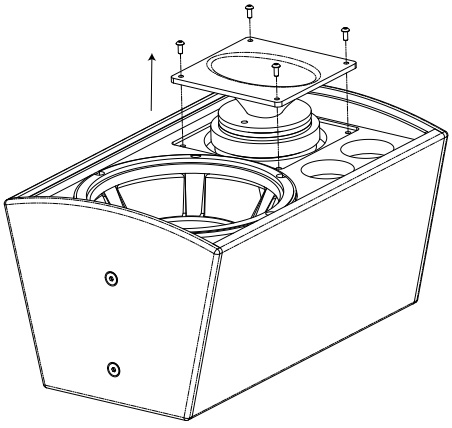


Figure 7.26: Removing horn screws

7.6 Horn rotation

Step 4:
Rotate the horn and return it to its position within the enclosure and redo all four screws.

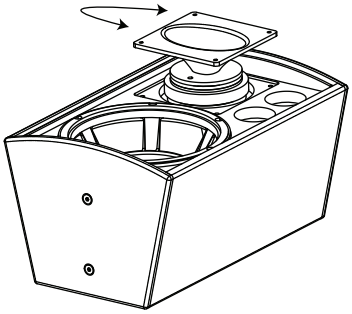


Figure 7.27: Rotating horn

Step 5:
Pull the cable ties toward the opposite edge of the loudspeaker and then lower the grill into position.

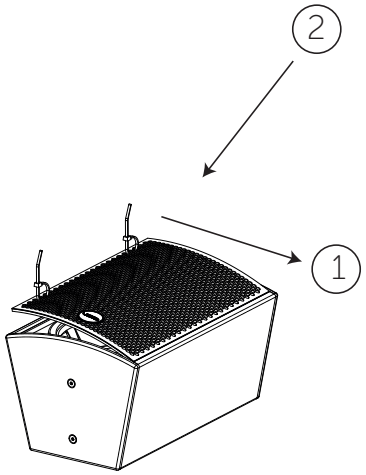


Figure 7.28: Refitting the grill

Step 5:
Remove the cable ties.

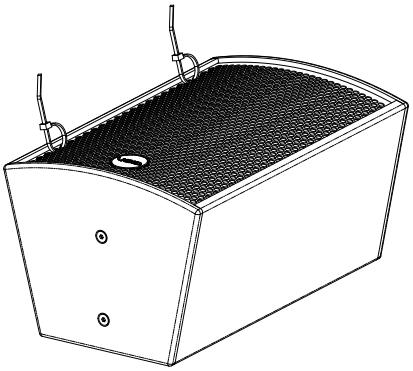


Figure 7.29: Removing cable ties

8 Service

Void Venu Series loudspeakers should only be serviced by a fully-trained technician.

No user serviceable parts inside. Refer servicing to your dealer.

8.1 Return authorisation

Before returning your faulty product for repair, please remember to get an R.A.N. (Return Authorisation Number) from the Void dealer who supplied the system to you. Your dealer will handle the necessary paperwork and repair. Failure to go through this return authorisation procedure could delay the repair of your product.

Note that your dealer will need to see a copy of your sales receipt as proof of purchase so please have this to hand when applying for return authorisation.

8.2 Shipping and packing considerations

- When sending a Void Venu Series loudspeaker to an authorised service centre, please write a detailed description of the fault and list any other equipment used in conjunction with the faulty product.
- Accessories will not be required. Do not send the instruction manual, cables or any other hardware unless your dealer asks you to.
- Pack your unit in the original factory packaging if possible. Include a note of the fault description with the product. Do not send it separately.
- Ensure safe transportation of your unit to the authorised service centre.

9 Appendix A: Specifications

A.1 Venu 6 specifications

Frequency response	72 Hz - 22 kHz ±3 dB
Efficiency[1]	95 dB 1W/1m
Crossover points	2.4 kHz passive
Nominal impedance	8 Ω
Power handling[2]	200 W AES
Maximum output[3]	118 dB cont, 121 dB peak
Driver configuration	1 x 6.5" LF, 1" HF compression driver
Dispersion	90°H x 60°V rotatable
Protection	HF electronic device
Connectors	1 x Phoenix with link out
Height	372 mm (14.6")
Width	239 mm (9.4")
Depth	200 mm (7.9")
Weight	8.5 kg (18.7 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

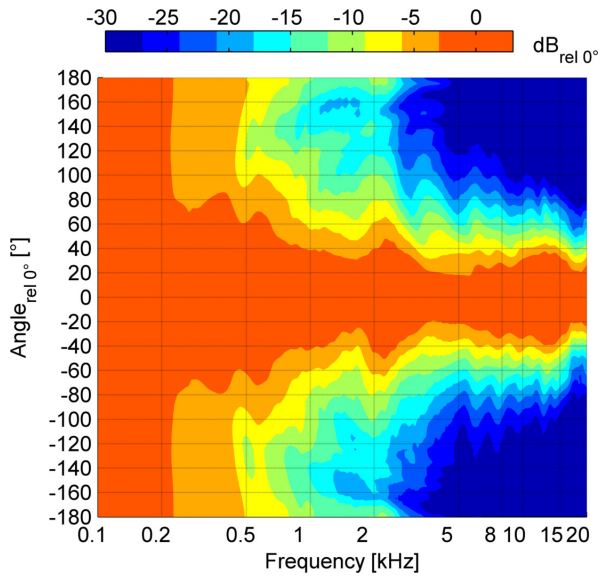


Figure A.1: Horizontal directivity isobars

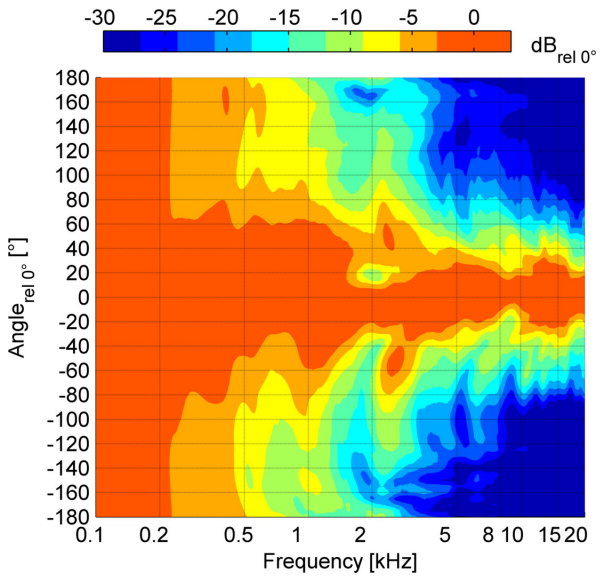


Figure A.2: Vertical directivity isobars

9 Appendix A: Specifications

A.2 Venu 8 specifications

Frequency response	60 Hz - 22 kHz ±3 dB
Efficiency[1]	97 dB 1W/1m
Crossover points	2.3 kHz passive
Nominal impedance	8 Ω
Power handling[2]	300 W AES
Maximum output[3]	121 dB cont, 124 dB peak
Driver configuration	1 x 8" LF, 1" HF compression driver
Dispersion	90°H x 60°V rotatable
Protection	HF electronic device
Connectors	1 x Phoenix with link out
Height	415 mm (16.3")
Width	260 mm (10.2")
Depth	223 mm (8.8")
Weight	11.5 kg (25.4 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

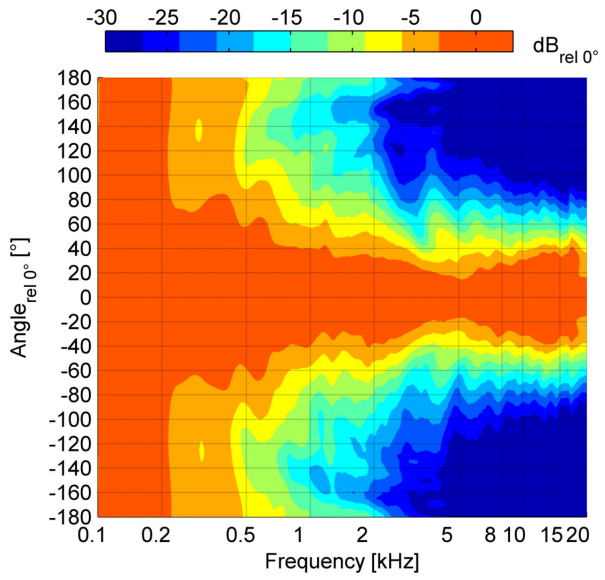


Figure A.3: Horizontal directivity isobars

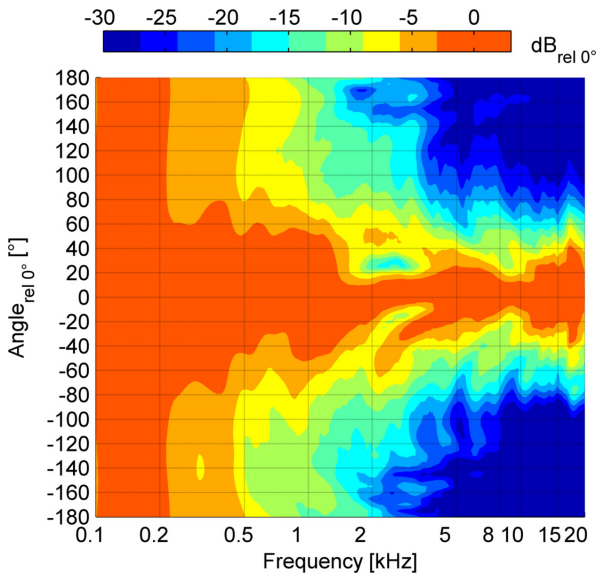


Figure A.4: Vertical directivity isobars

9 Appendix A: Specifications

A.3 Venu 10 specifications

Frequency response	52 Hz - 22 kHz ±3 dB
Efficiency[1]	97 dB 1W/1m
Crossover points	2.1 kHz passive
Nominal impedance	8 Ω
Power handling[2]	350 W AES
Maximum output[3]	123 dB cont, 126 dB peak
Driver configuration	1 x 10" LF, 1 x 1" HF compression driver
Dispersion	90°H x 60°V rotatable
Protection	HF electronic device
Connectors	1 x Phoenix with link out
Height	469 mm (18.5")
Width	315 mm (12.4")
Depth	250 mm (9.8")
Weight	14.5 kg (32 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

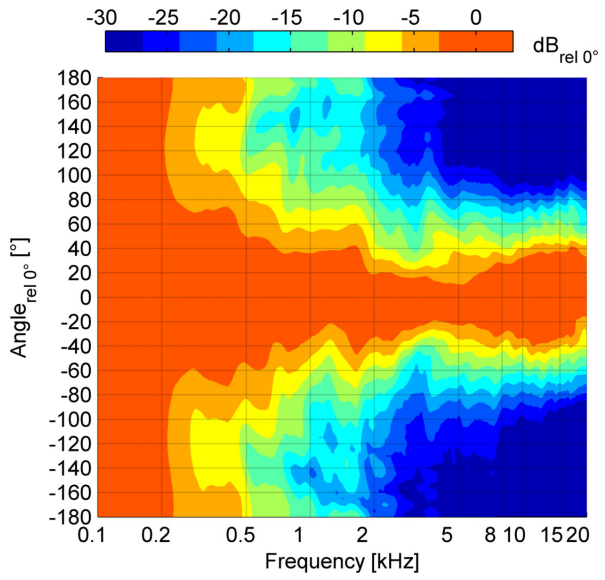


Figure A.5: Horizontal directivity isobars

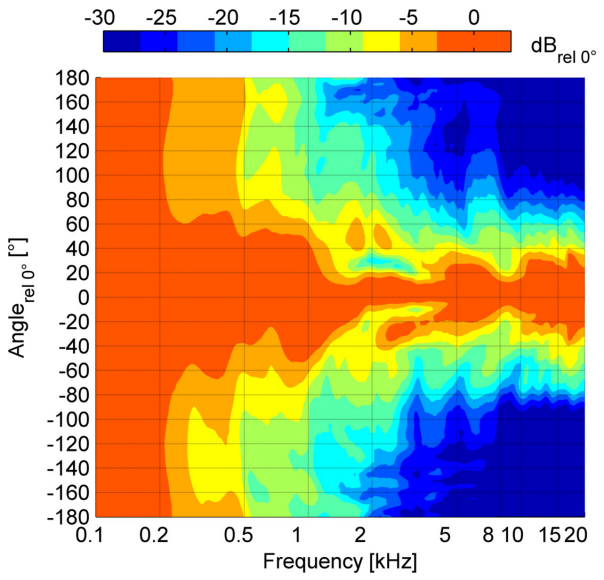


Figure A.6: Vertical directivity isobars

9 Appendix A: Specifications

A.4 Venu 12 specifications

Frequency response	50 Hz - 22 kHz ±3 dB
Efficiency[1]	98 dB 1W/1m
Crossover points	1.9 kHz passive
Nominal impedance	8 Ω
Power handling[2]	400 W AES
Maximum output[3]	124 dB cont, 127 dB peak
Driver configuration	1 x 12" LF, 1 x 1" HF compression driver
Dispersion	90°H x 60°V rotatable
Protection	HF electronic device
Connectors	1 x Phoenix with link out
Height	522 mm (20.6")
Width	385 mm (15.2")
Depth	330 mm (13")
Weight	19.5 kg (43 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

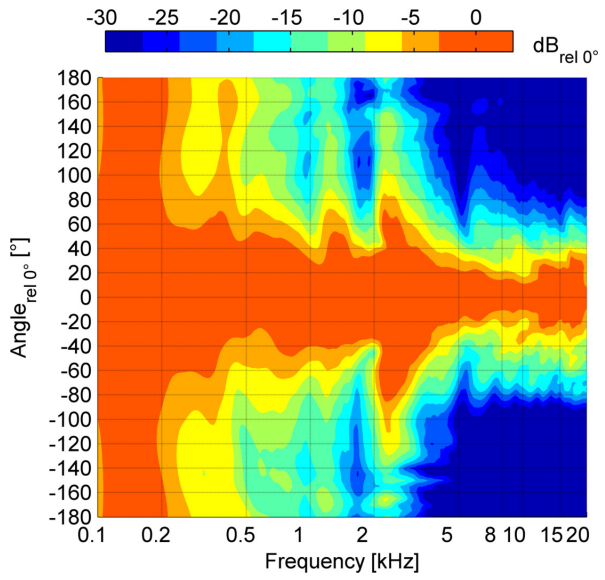


Figure A.7: Horizontal directivity isobars

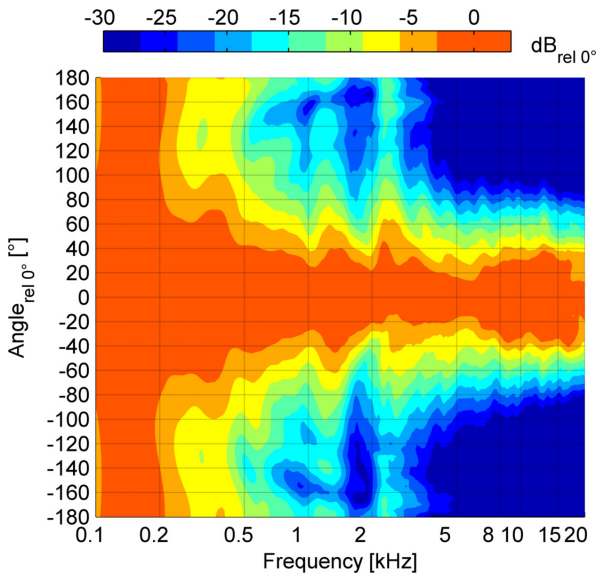


Figure A.8: Vertical directivity isobars

9 Appendix A: Specifications

A.5 Venu Bass specifications

Frequency response	40 Hz - 160 Hz ±3 dB
Efficiency[1]	99 dB 1W/1m
Crossover points	80 Hz - 160 Hz active
Nominal impedance	8 Ω
Power handling[2]	600 W AES
Maximum output[3]	123 dB cont, 129 dB peak
Driver configuration	1 x 12" LF
Connectors	1 x Phoenix with link out
Height	370 mm (14.6")
Width	430 mm (16.9")
Depth	490 mm (19.3")
Weight	24 kg (52.9 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

A.6 Venu X specifications

Frequency response	34 Hz - 160 Hz ±3 dB
Efficiency[1]	99 dB 1W/1m
Crossover points	80 Hz - 160 Hz active
Nominal impedance	4 Ω
Power handling[2]	1200 W AES
Maximum output[3]	128 dB cont, 134 dB peak
Driver configuration	2 x 12" LF
Connectors	1 x Phoenix with link out
Height	370 mm (14.6")
Width	780 mm (30.7")
Depth	490 mm (19.3")
Weight	44.5 kg (98.1 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

9 Appendix A: Specifications

A.7 Venu 115 specifications

Frequency response	38 Hz - 160 Hz ±3 dB
Efficiency[1]	96 dB 1W/1m
Crossover points	80 Hz - 160 Hz active
Nominal impedance	8 Ω
Power handling[2]	500 W AES
Maximum output[3]	123 dB cont, 129 dB peak
Driver configuration	1 x 15" LF
Connectors	1 x Phoenix with link out
Height	446 mm (17.6")
Width	448 mm (17.6")
Depth	636 mm (25")
Weight	35 kg (77.2 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

A.8 Venu 215 specifications

Frequency response	38 Hz - 160 Hz ±3 dB
Efficiency[1]	99 dB 1W/1m
Crossover points	80 Hz - 160 Hz active
Nominal impedance	4 Ω
Power handling[2]	1000 W AES
Maximum output[3]	130 dB cont, 136 dB peak
Driver configuration	2 x 15" LF
Connectors	1 x Phoenix with link out
Height	446 mm (17.6")
Width	860 mm (33.9")
Depth	636 mm (25")
Weight	62.5 kg (137.8 lbs)
Enclosure	15 mm birch plywood
Finish	Textured polyurethane
Grill	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

9 Appendix A: Specifications

A.9 Venu Sub specifications

Frequency response	41 Hz - 150 Hz ±3 dB
Efficiency[1]	96 dB 1W/1m
Nominal impedance	8 Ω
Power handling[2]	2 x 200 W AES
Maximum output[3]	119 dB cont, 125 dB peak
Driver configuration	1 x 12" dual coil LF
Connectors	5 x 4-pole speakON™ NL4
Height	356 mm (14")
Width	634 mm (25")
Depth	360 mm (14.2")
Weight	25.4 kg (56 lbs)
Enclosure	18 mm MDF
Finish	Textured polyurethane

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

10 Appendix B: Dimensions

B.1 Venu 6 dimensions

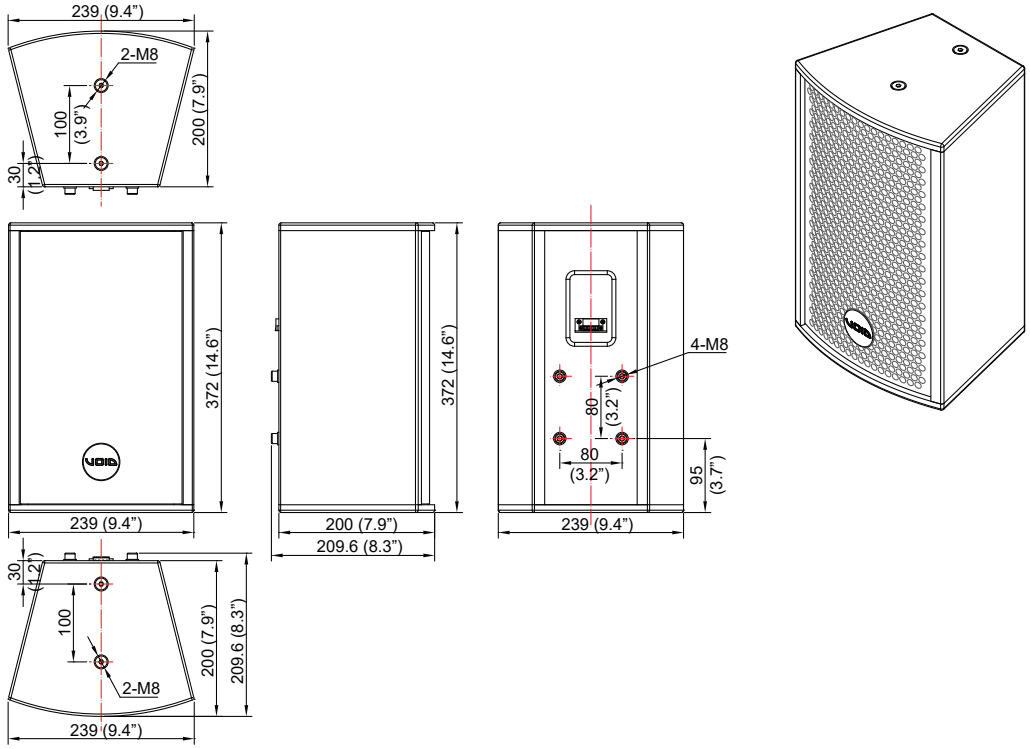


Figure B.1: Venu 6 dimensions

B.2 Venu 8 dimensions

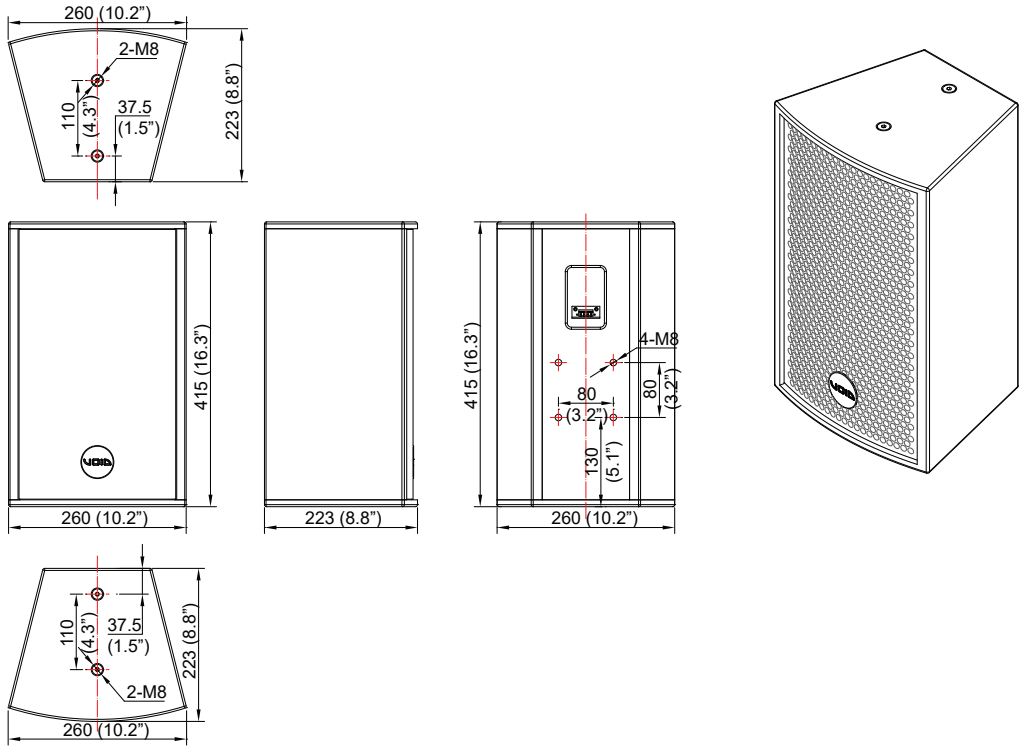


Figure B.2: Venu 8 dimensions

10 Appendix B: Dimensions

B.3 Venu 10 dimensions

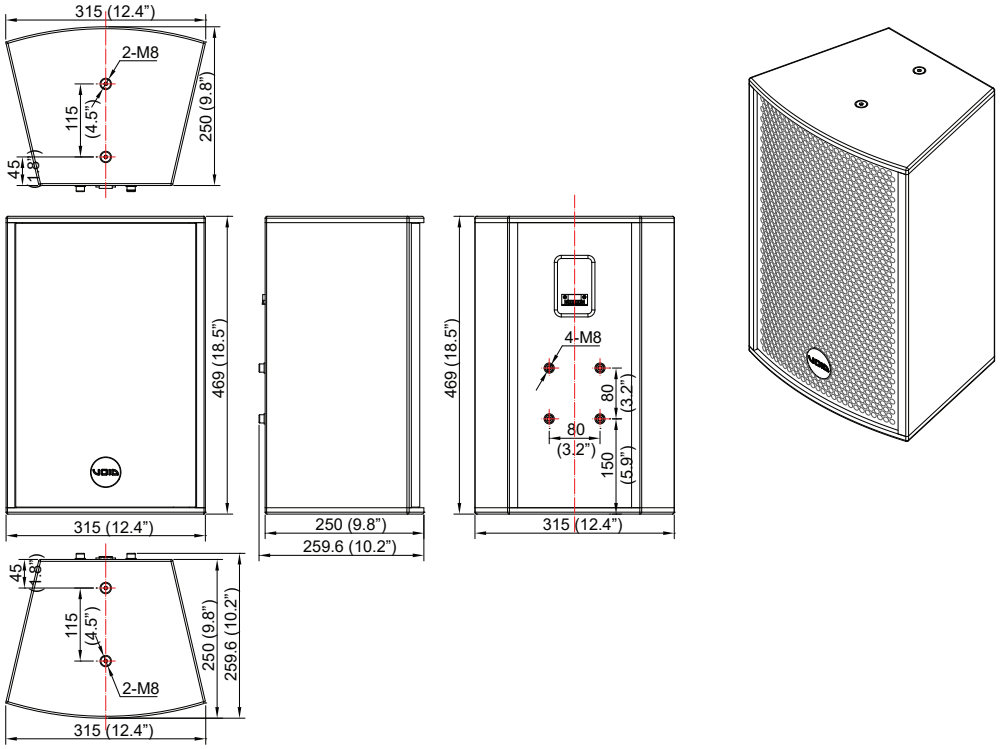


Figure B.3: venu 10 dimensions

B.4 Venu 12 dimensions

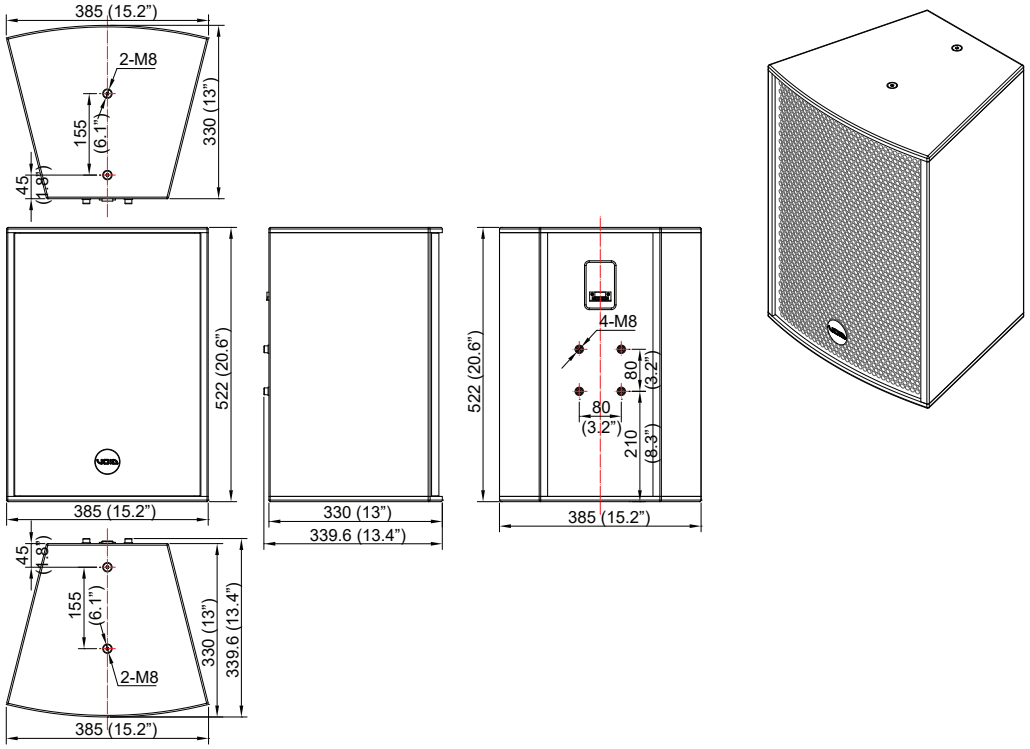


Figure B.4: Venu 12 dimensions

10 Appendix B: Dimensions

B.5 Venu Bass dimensions

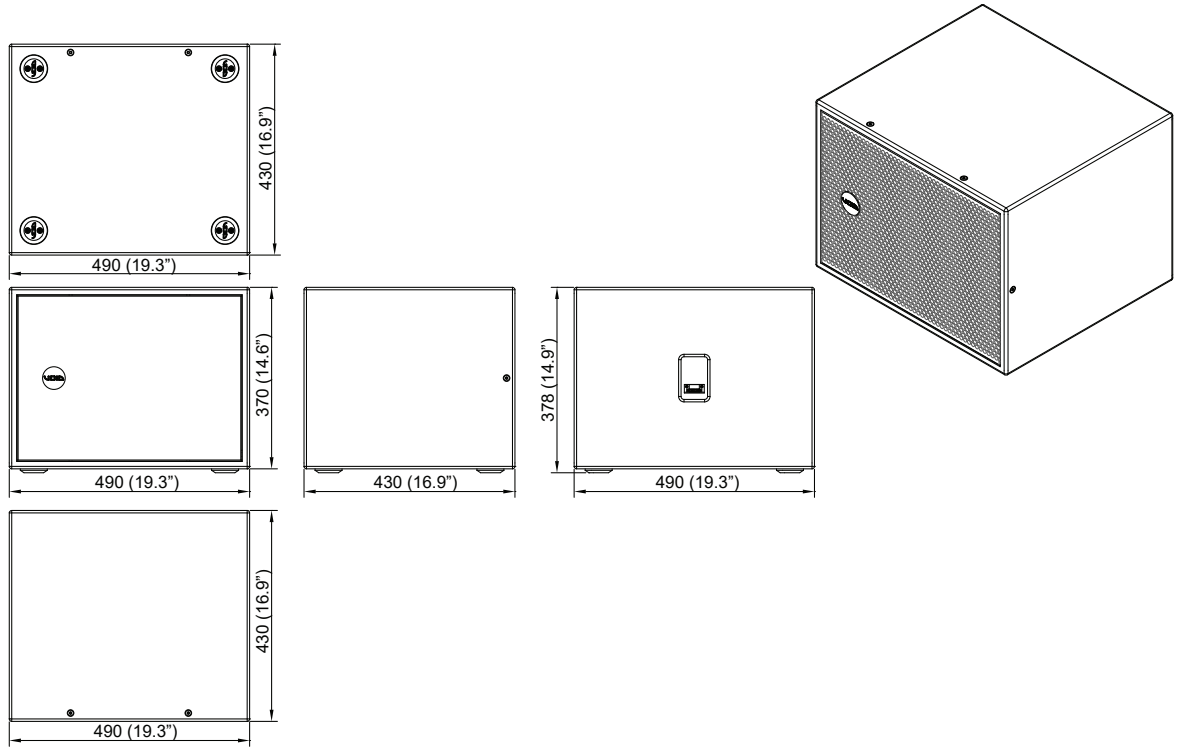


Figure B.5: Venu Bass dimensions

B.6 Venu X dimensions

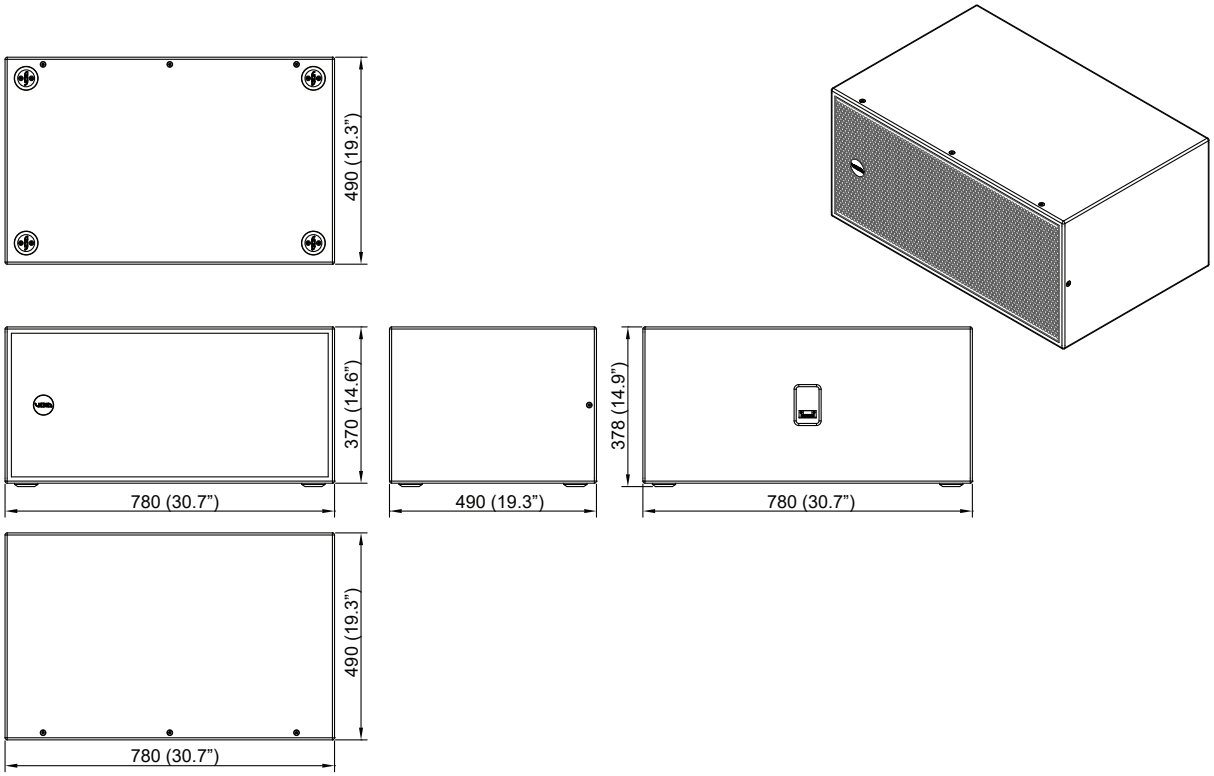


Figure B.6: Venu X dimensions

10 Appendix B: Dimensions

B.7 Venu 115 dimensions

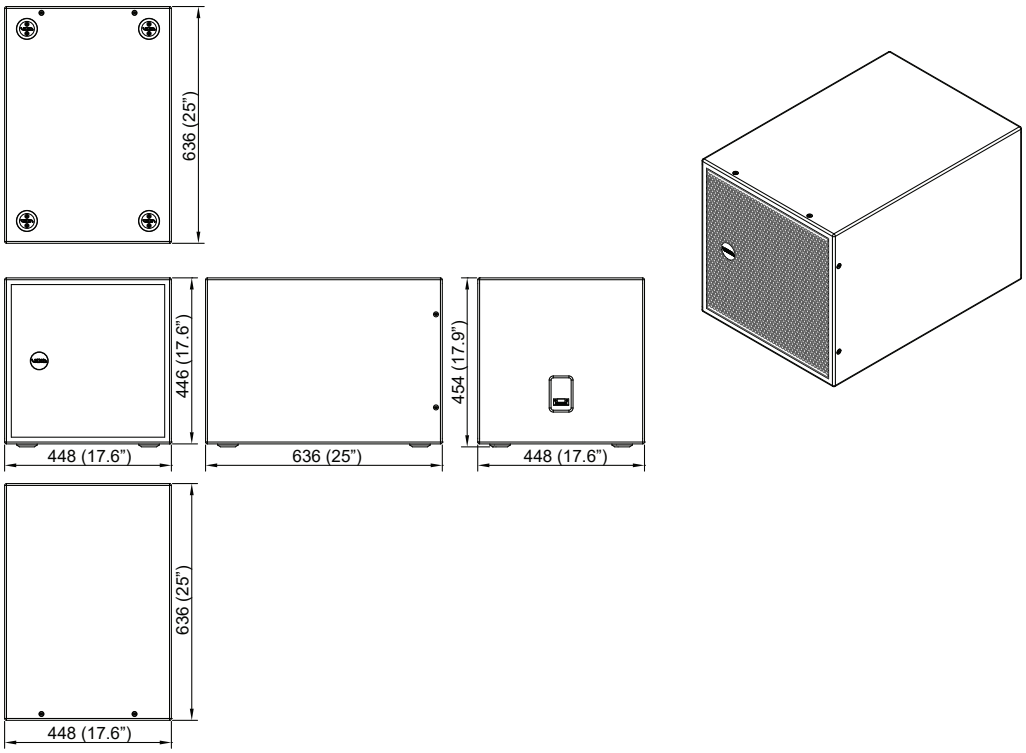


Figure B.7: Venu 115 dimensions

B.8 Venu 215 dimensions

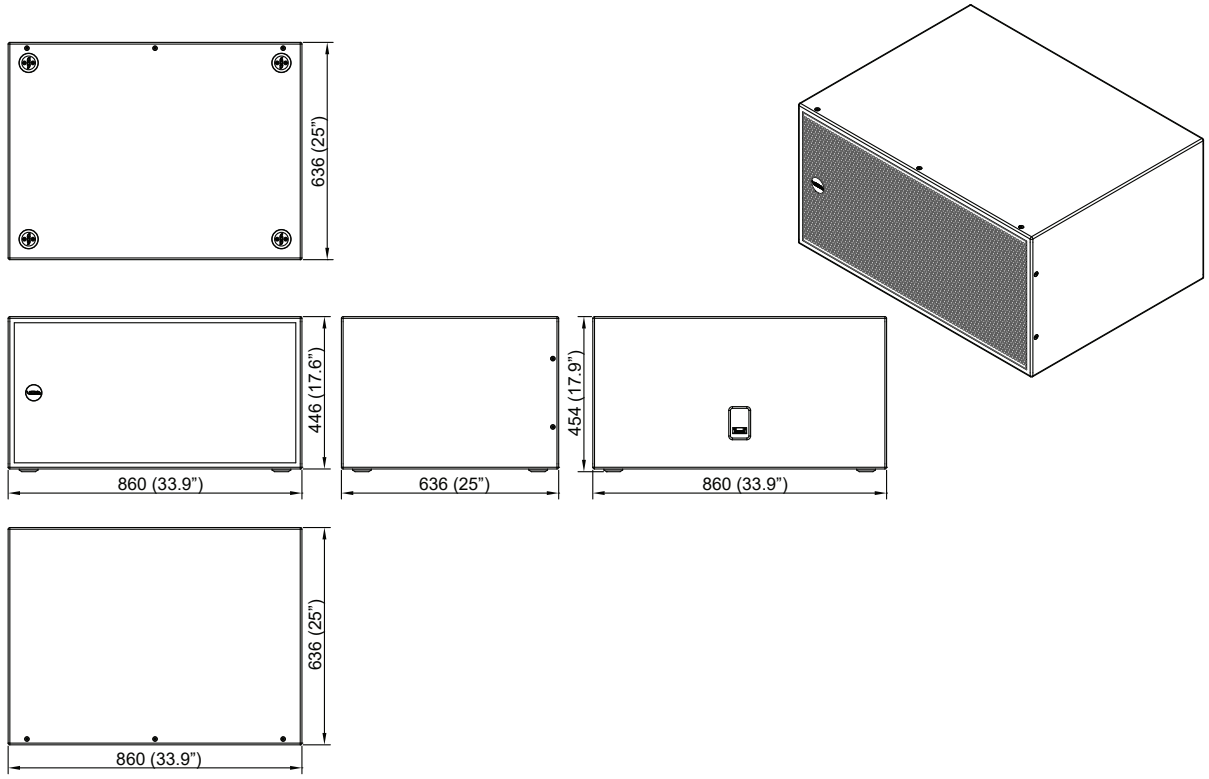


Figure B.8: Venu 215 dimensions

10 Appendix B: Dimensions

B.9 Venu Sub dimensions

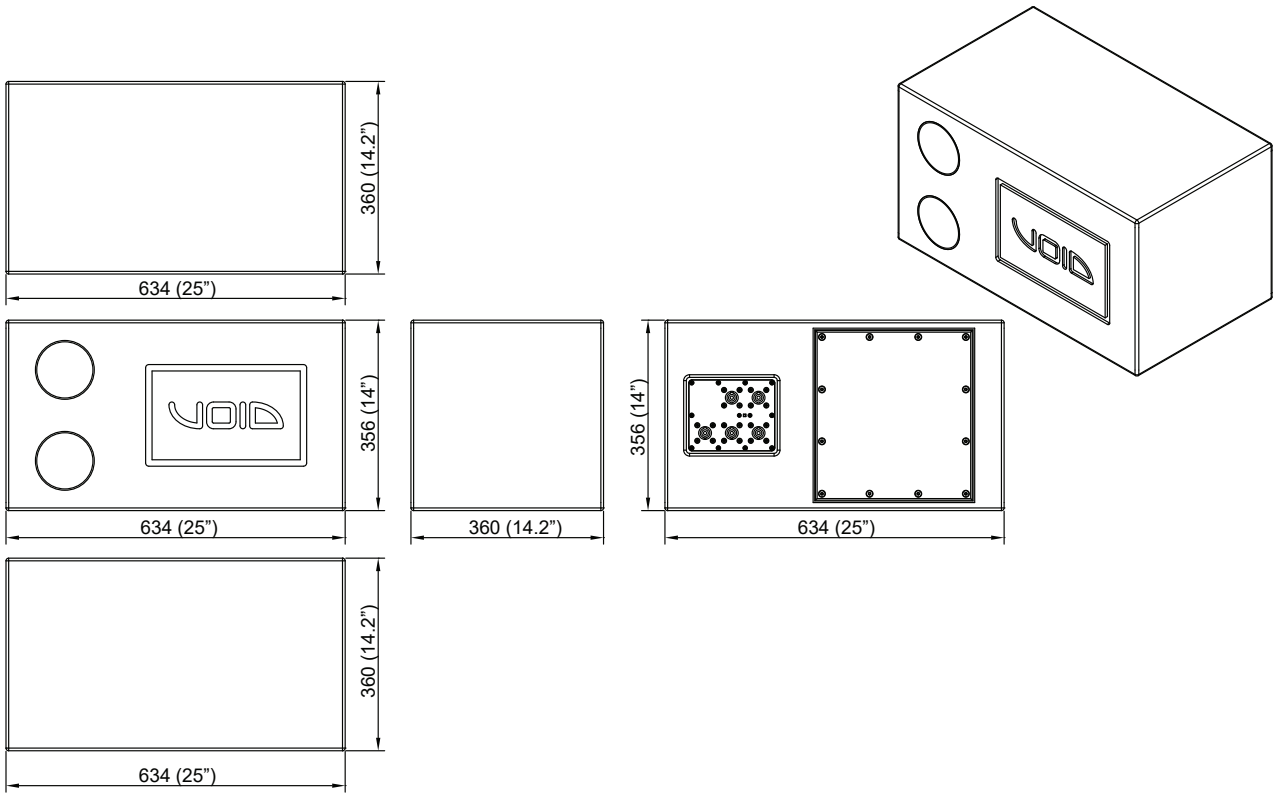


Figure B.9: Venu Sub dimensions

11 Appendix C: Impedance graphs

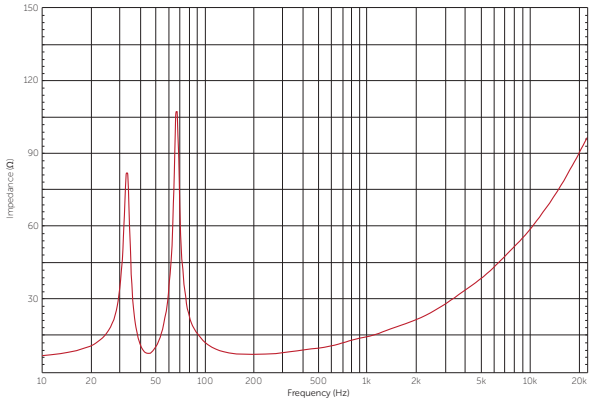


Figure C.1: Venu Bass impedance graph

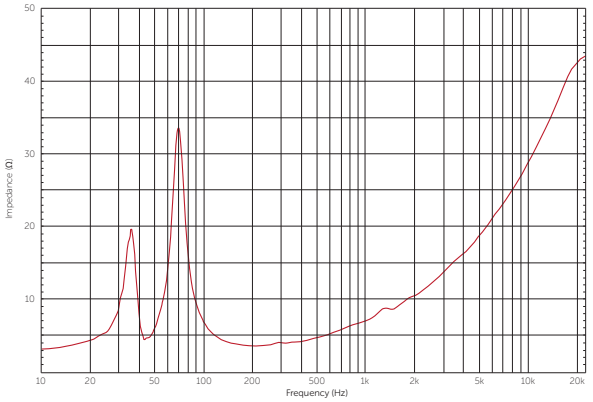


Figure C.2: Venu X impedance graph

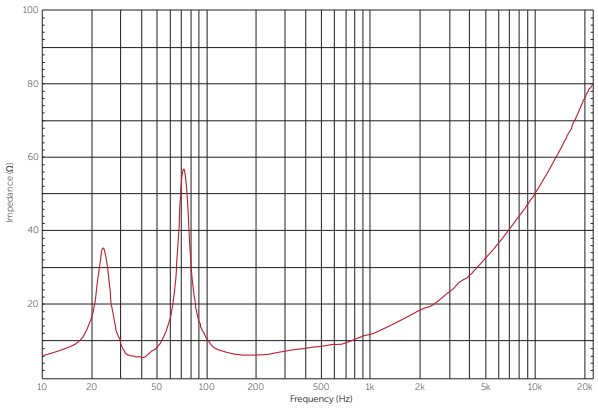


Figure C.3: Venu 115 impedance graph

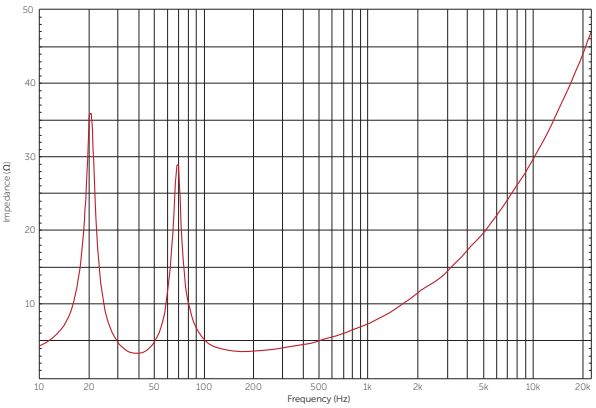


Figure C.4: Venu 215 impedance graph

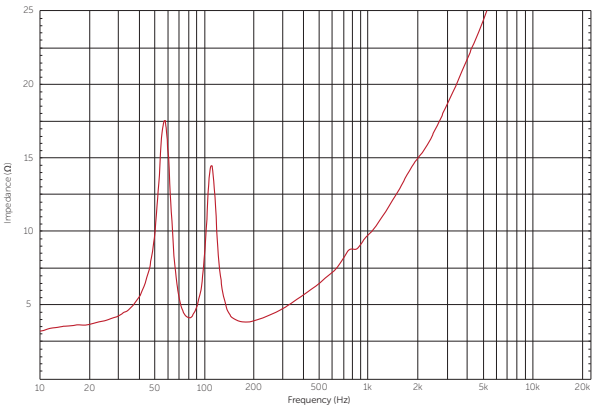


Figure C.5: Venu Sub active mode impedance graph

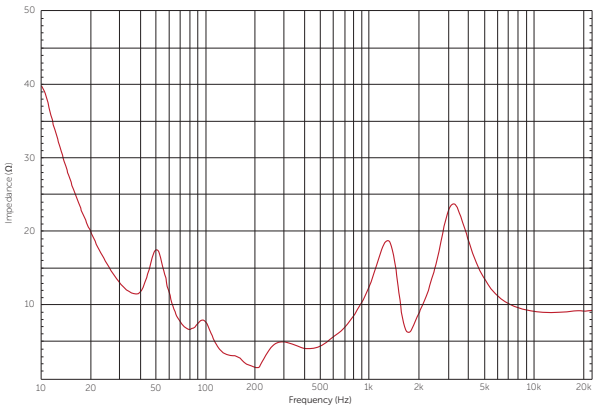


Figure C.6: Venu Sub passive mode impedance graph (one input with Air 8 output)

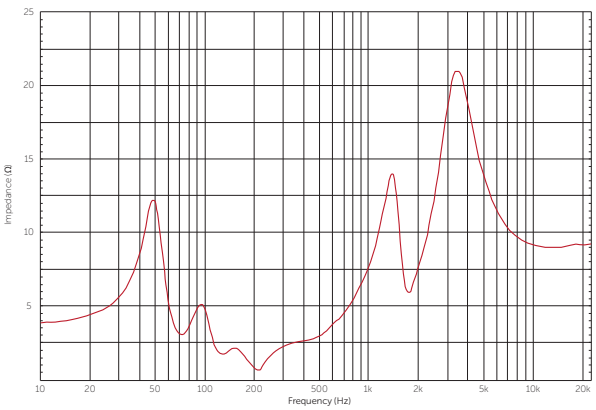


Figure C.7: Venu Sub passive mode impedance graph (both channels)

12 Appendix D: architectural specifications

Venu 6 architectural specifications

The loudspeaker shall be a passive two-way system consisting of one high power 6.5" (165 mm), direct radiating, reflex loaded, low frequency (LF) transducer and 1" (25 mm) diameter composite plastic exit, high frequency (HF) compression driver mounted on a user rotatable elliptic horn in a trapezoidal enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 38.1 mm (1.5") voice coil, wound with copper wires on a high quality Kapton voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project it's sound through an elliptic horn with a 150 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 72 Hz to 22 kHz ($\pm$3 dB) and shall average 90° directivity pattern on the horizontal axis and 60° on the vertical one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; and a maximum SPL of 121 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 200 W AES at a rated impedance of 8 Ω. Crossover point shall be at 2.4 kHz using a 3rd order filter (18 dB per octave). The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via a single removable lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be of a trapezoidal shape constructed from a 15 mm multi-laminate birch plywood of 15 mm construction, with a textured polyurethane finish and shall include integral threaded inserts for the fitment of wall and ceiling mounting hardware with external dimensions of (W) 372 mm x (H) 239 mm x (D) 200 mm (14.6" x 9.4" x 7.9"). Weight shall be 8.5 kg (18.7 lbs).

The loudspeaker shall be the Void Acoustics Venu 6.

12 Appendix D: architectural specifications

Venu 8 architectural specifications

The loudspeaker shall be a passive two-way system consisting of one high power 8" (165 mm), direct radiating reflex loaded, low frequency (LF) transducer and 1" (25 mm) diameter composite plastic exit, high frequency (HF) compression driver mounted on a user rotatable elliptic horn in a trapezoidal enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 50.8 mm (2") voice coil, wound with copper wires on a high quality Kapton voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project it's sound through an elliptic horn with a 150 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 60 Hz to 22 kHz ($\pm$3 dB) and with an average 90° directivity pattern on the horizontal axis and 60° on the vertical one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; and a maximum SPL of 124 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 300 W AES at a rated impedance of 8 Ω. Crossover point shall be at 2.4 kHz using a 3rd order filter (18 dB per octave). The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via a single removable, lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be of a trapezoidal shape constructed from a 15 mm multi-laminate birch plywood of 15 mm construction, with a textured polyurethane finish and shall include integral threaded inserts for the fitment of wall and ceiling mounting hardware with external dimensions of (W) 260 mm x (H) 415 mm x (D) 223 mm (10.2" x 16.3" x 8.8"). Weight shall be 11.5 kg (25.4 lbs).

The loudspeaker shall be the Void Acoustics Venu 8.

12 Appendix D: architectural specifications

Venu 10 architectural specifications

The loudspeaker shall be a passive two-way system consisting of one high power 10" (250 mm), direct radiating reflex, loaded low frequency (LF) transducer and 1" (25 mm) diameter composite plastic exit high frequency (HF) compression driver mounted on a user rotatable elliptic horn in a trapezoidal enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 50.8 mm (2") voice coil, wound with copper wires on a high quality Kapton voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project its sound through an elliptic horn with a 150 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 52 Hz to 22 kHz (±3 dB) and with an average 90° directivity pattern on the horizontal axis and 60° on the vertical one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; and a maximum SPL of 126 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 350 W AES at a rated impedance of 8 Ω. Crossover point shall be at 2.1 kHz using a 3rd order filter (18 dB per octave). The system shall be powered by its own dedicated power amplification module with DSP management, with the wiring connection via a single removable, lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be of a trapezoidal shape constructed from a 15 mm multi-laminate birch plywood of 15 mm construction with a textured polyurethane finish and shall include integral threaded inserts for the fitment of wall and ceiling mounting hardware with external dimensions of (W) 315 mm x (H) 469 mm x (D) 250 mm (12.4" x 18.5" x 9.8"). Weight shall be 14.5 kg (32 lbs).

The loudspeaker shall be the Void Acoustics Venu 10.

12 Appendix D: architectural specifications

Venu 12 architectural specifications

The loudspeaker shall be a passive two-way system consisting of one high power 12" (250 mm) direct radiating, reflex loaded, low frequency (LF) transducer and 1" (25 mm) diameter composite plastic exit, high frequency (HF) compression driver mounted on a user rotatable elliptic horn in a trapezoidal enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 50.8 mm (2") voice coil, wound with copper wires on a high quality Kapton voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project it's sound through an elliptic horn with a 150 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 50 Hz to 22 kHz ($\pm$3 dB) and shall average 90° directivity pattern on the horizontal axis and 60° on the vertical one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; and a maximum SPL shall be 127 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 400 W AES at a rated impedance of 8 Ω. Crossover point shall be at 1.9 kHz using a 3rd order filter (18 dB per octave). The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via a single removable lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be of a trapezoidal shape constructed from a 15 mm multi-laminate birch plywood of 15 mm construction with a textured polyurethane finish and shall include integral threaded inserts for the fitment of wall and ceiling mounting hardware, with external dimensions of (W) 385 mm x (H) 522 mm x (D) 330 mm (15.2" x 20.6" x 13"). Weight shall be 19.5 kg (43 lbs).

The loudspeaker shall be the Void Acoustics Venu 12.

12 Appendix D: architectural specifications

Venu 115 architectural specifications

The loudspeaker shall be a compact sub bass system consisting of one high power 15" (381 mm), direct radiating, reflex loaded low frequency (LF) transducer in a rectangular enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, high excursion 101.6 mm (4") voice coil, wound with copper wire on a high quality voice coil former, for high power handling and long-term reliability.

Performance specifications for a typical production unit shall be as follows: the usable bandwidth shall be 38 Hz to 160 Hz (±3 dB) and shall have a maximum on axis SPL of 129 dB peak (123 dB continuous) measured at 1m using IEC268-5 pink noise. Power handling shall be 500 W AES at a rated impedance of 8 Ω. Pressure sensitivity shall be 96 dB measured at 1W/1m. The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via a single removable, lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be constructed from a 18 mm multi-laminate birch plywood finished in textured polyurethane and shall contain fixture points for a pressed weather-resistant, powder coated steel grille to protect the low frequency transducers with the external dimensions of (H) 446 mm x (W) 448 mm x (D) 636 mm (17.6" x 17.6" x 25"). Weight shall be 24 kg (52.9 lbs).

The loudspeaker system shall be a Void Acoustics Venu 115.

12 Appendix D: architectural specifications

Venu 215 architectural specifications

The loudspeaker shall be a sub bass system consisting of two high power 15" (381 mm), direct radiating reflex loaded low frequency (LF) transducers in a rectangular enclosure.

The low frequency transducers shall be constructed on a cast aluminium frame, with a treated paper cone, high excursion 101.6 mm (4") voice coil, wound with copper wire on a high quality voice coil former, for high power handling and long-term reliability.

Performance specifications for a typical production unit shall be as follows: the usable bandwidth shall be
38 Hz to 160 Hz (±3 dB) and with a maximum on axis SPL of 136 dB peak (130 dB continuous) measured at 1 m using IEC268-5 pink noise. Power handling shall be 1000 W AES at a rated impedance of 4 Ω. Pressure sensitivity shall be 99 dB measured at 1W/1m. The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via a single removable, lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be constructed from a 15 mm multi-laminate birch plywood, finished in textured polyurethane and shall contain fixture points for a pressed weather-resistant, powder coated steel grille to protect the low frequency transducers with the external dimensions of (H) 446 mm x (W) 860 mm x (D) 636 mm (17.6" x 33.9" x 25"). Weight shall be 62.5 kg (137.8 lbs).

The loudspeaker system shall be a Void Acoustics Venu 215.

12 Appendix D: architectural specifications

Venu Bass architectural specifications

The loudspeaker system shall be of the active type consisting of one high power 12" (304.8 mm) direct radiating, reflex loaded low frequency (LF) transducer in a rectangular enclosure. The enclosure shall be constructed from a 15 mm multi-laminate birch plywood, finished in textured polyurethane with the external dimensions of (H) 370 mm x (W) 490 mm x (D) 430 mm (14.6" x 19.3" x 16.9"). The cabinet shall contain fixture points for a pressed steel powder coated grille to be fitted to the front to protect the LF transducer.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 101.6 mm (4") voice coil, wound with copper wire on a high quality voice coil former, for high power handling and long-term reliability.

Performance specifications or a typical production unit shall be as follows: 600 W long-term program per voice coil using EIA RS- 426A pink noise (6 dB crest factor). Frequency response, 40 Hz–160 Hz (-10 dB from rated sensitivity). Pressure sensitivity, 96 dB at one Watt 100 Hz–10 kHz at one metre. Rated nominal Impedance shall be 4 Ω.The loudspeaker shall weigh 24 kg (52.9 lbs) in its entirety.

The wiring connection shall be via a single removable lockable wiring connector with four terminals (one pair for input and one pair for loop-out to another loudspeaker) with screw-down terminals to provide secure wiring and to allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The loudspeaker system shall be a Void Acoustics Venu Bass.

12 Appendix D: architectural specifications

Venu Sub architectural specifications

The loudspeaker shall be a switchable active/passive compact sub bass system consisting of one high power 12" (304.8 mm) bandpass loaded low frequency (LF) transducer mounted in a rectangular enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, long excursion dual 50.8 mm (2") voice coil, wound with copper wires on a high quality voice coil former and a neodymium magnet for high power handling and long-term reliability.

Performance specifications for a typical production unit shall be as follows: the usable bandwidth shall be 41 Hz to 150 Hz (±3 dB) and with a maximum on axis SPL of 119 dB continuous (125 dB peak) measured at 1 m using IEC268-5 pink noise. Power handling shall be 2 x 200 W AES at a rated impedance of 8 Ω. Pressure sensitivity shall be 99 dB measured at 1W/1m. The system shall be powered by its own dedicated power amplification module with DSP management. The wiring connection shall be via five Neutrik speakON™ NL4 (one in active mode and four in passive mode) to allow for pre-wiring of the connector before installation. In passive mode two of the connectors shall be for input and two provide loop-out to another loudspeaker.

The enclosure shall be of a vented type constructed from a 18 mm MDF finished in a textured polyurethane. The cabinet shall have a recessed rear connector panel to allow placing it against the wall. External dimensions of (H) 356 mm x (W) 634 mm x (D) 360 mm (14" x 25" x 14.2"). Weight shall be 25.4 kg (56 lbs).

The loudspeaker system shall be a Void Acoustics Venu Sub.

12 Appendix D: architectural specifications

Venu X architectural specifications

The loudspeaker shall be a compact sub bass system consisting of two high power 12" (304.8 mm) direct radiating reflex loaded low frequency (LF) transducers mounted in a rectangular enclosure.

The low frequency transducers shall be constructed on a cast aluminium frame, with a treated paper cone, dual 50.8 mm (2") voice coil, wound with copper wires on a high-quality voice coil former for high power handling and long-term reliability.

Performance specifications for a typical production unit shall be as follows: the usable bandwidth shall be 34 Hz to 160 Hz (±3 dB) and have a maximum on axis SPL of 134 dB peak (128 dB continuous) measured at 1 m using IEC265-5 pink noise. Power handling shall be 1200 W AES at a rated impedance of 4 Ω and a pressure sensitivity of 99 dB measured at 1W/1m. The system shall be powered by its own dedicated power amplification module with DSP management, with the wiring connection via a single removable, lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure shall be constructed from a 15 mm multi-laminate birch plywood, finished in a textured polyurethane and shall contain fixture points for a pressed weather-resistant, powder coated steel grille to protect the low frequency transducer. The cabinet shall have a recessed rear connector panel to allow placing it against the wall. External dimensions of (H) 370 mm x (W) 780 mm x (D) 490 mm (14.6" x 30.7" x 19.3"). Weight shall be 44.5 kg (98.1 lbs).

The loudspeaker system shall be a Void Acoustics Venu X.

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