CVLINK Series Loudspeaker System

User's Manual

Contents

1 – Safety

1.1 Guidelines for Safety

1. Please read the following guidelines.
2. Please keep the following guidelines.
3. Please pay attention to all warning information.
4. Please comply with all guidelines.
5. Do not expose the front of the Loudspeaker directly to rain or ocean wave.
6. Do not install the equipment near heat sources, such as transmitters, electric heaters, furnaces or other equipment that can generate heat.
7. Only use fittings designated by the manufacturer.
8. Wipe the equipment with dry cloth only.
9. Only use movable cabinets, stands, tripods, holders, or platforms designated by the manufacturer or sold alongside the equipment. If a movable cabinet is used, exercise caution when moving the assembled movable cabinet and the equipment to prevent damage caused by overturn.
10. The equipment should be repaired in case of any damage. All repairing services should be provided by qualified repairing personnel.
11. Please contact professionals for further maintenance problems.
12. Please do not repair the equipment by yourself unless you are qualified.
13. Long exposure to overly high sound pressure levels may lead to hearing damage. The Loudspeaker can easily produce sound pressure levels (SPL) that can cause permanent hearing damage to performers, production crews, and audience. Take care to avoid long exposure to SPL of over 90 dB.
14. Please read the System Rigging Manual before installing and using the Product.

1.2 General Hardware Information

Any hardware used in Overhead Setup shall have a load that fits its intended use. In general, the hardware can be obtained from the rigging supply rooms, the industrial supply catalogs, and the specialized rigging dealers. Local hardware stores normally do not have a stock of these products.

1.3 Structural Link

Before installing any suspended object, the location and method of structural connection must be approved by a licensed professional engineer. For design purpose, the following performance standards shall be provided to such professional engineer: Uniform building codes (if applicable), municipal building codes (if applicable) and seismic codes (if applicable). The hardware shall be installed and connected in ways designated by such professional engineer. Improper installation may cause product damage or personal injury.

1.4 Important Security Warning

The information contained in the section is compiled with widely-accepted engineering data, and is only used for reference only.

None of such information should be used without receiving appropriate advice on particular applicability.

No information provided herein constitutes representation or warranty. Any person who uses such information shall be solely liable for any consequence arising from the use of such information.

Due to differences in material size, specifications and/or local regulations, users in other countries should seek advice from appropriate engineering and regulatory authorities for specific guidelines.

To ensure safety in system suspension, please make sure all hardwares contained are correctly used. Careful calculations should be made to ensure that all components are used within their workload limits before being suspended. Never exceed the maximum recommended rated load.

Before suspending any Loudspeaker system, all parts, including housings, rigging frames, pins, ring bolts and track fittings, should be checked. Any cracked, deformed, corroded or missing/loose/damaged component can reduce the strength and safety of the array. Otherwise, adequate corrective actions should be taken.

When suspending a model of Loudspeaker with high sound pressure level, only hardware with rated load should be used.

When being used in outdoor space, the Loudspeaker should not face or soak in water. For details, please refer to the Product Manual or seek advice from engineers.

1.5 You are new to fixture of rigging

If you are using the installation support for the first time, you should:

Learn about the safety rules about rigging.

Attend sessions about safe operation.

Meet engineers who hold mechanical or structural licenses, and maintain communication with them. Keep asking these engineers questions, and focus on the knowledge rather than only looking for answers.

Study and understand the specifications, practices and requirements for the venue where you intend to operate the audio system.

1.6 Check and Maintenance

The Suspension System is made up of mechanical fixtures, and therefore requires regular check and maintenance to ensure its adequate functionality. Before suspending any Loudspeaker system, all parts, including housings, suspension frames & trays, pins, and movable eye bolts, should be checked. Any cracked, deformed, corroded or missing/loose/damaged part can reduce the strength and safety of the array. Do not suspend or mount the Loudspeaker with a pole before adequate corrective measures are taken. Installed systems should be examined at least once a year. Such examination should include visual examination of all corners and bearing, including cracked surface, water damage, delamination or any situation that may reduce the strength of the Loudspeaker's housing.

According to local regulations, the hardware for accessory suspension shall be examined at least once a year or as required otherwise. Such examination should include visual examination of corrosion or bending in materials, or any other sign that may reduce the strength of fastener. In addition, any eye bolt should be checked to determine whether there is a possibility for rotation out of the housing.

For all other hardware and accessories, please refer to the hardware manufacturer's guidelines for technology examination and maintenance.

No liability should arise from the use of the Product for any purpose or the misuse of the information provided herein for any purpose. Moreover, no liability should arise from Product damage caused by violation of the examination or maintenance process.

Before suspending a system, experienced experts who have received training in suspension of Loudspeaker system should be arranged to check all parts and components.

1.7 Signs

!: The sign indicates the potential risk of injury or damage to a person or equipment. All instructions containing such sign shall be strictly complied with.

i: The sign indicates useful and relevant information about the topic.

: This sign indicates the instructions that you should follow in the process of installing and using the Product.

: This sign indicates the tools that you should use in the process of installing and using the Product.

JBL CVLINK Series products

JBL has kept innovating for more than 75 years. CVLINK passive line-array loudspeaker series stands out from JBL's many creative applications and becomes a milestone. CVLINK represents the next generation of passive line-array loudspeaker system, and excels in performance, system integration and user-friendliness.

CVLINK draws on various patented technologies of JBL in drivers, waveguides and suspensions. CVLINK Loudspeaker uses JBL's high-performance transducer design, internal manufacturing, breakthrough technologies, as well as holistic and systematic methods to deliver superior experience that aligns with JBL's stringent standards for sound quality. It reaches out to engineers, system engineers, construction workers and audience.

For a fixed system operator, CVLINK series has JBL's superior sound quality, tech support from experts and advanced tools. The best standards, configurations and operations of CVLINK series can be realized in any venue. The series also provides comprehensive solutions with the best sound quality and highly efficient working procedures that can be intuitionally set, adjusted and easily installed.

2 – DECLARATION OF CONFORMITY

BRAND: JBL Professional

FAMILY NAME: CVLINK Line array loudspeaker

MODEL NAMES:

CVL28

CVL18S

3 – SYSTEM COMPONENTS

CVL28

CVL18S

4 – INTRODUCTION

4.1 CVL28 Passive Line-array Full Range Loudspeaker

As a passive line-array full-range loudspeaker, the compact design CVL28 provides cutting edge JBL line-array technologies for small and medium-sized venues. CVL28 aims to deliver quality audio experience in facilities including multi-function halls, stadiums, banquet halls and more. Unlike ground installation solutions, CVL28 can be installed via suspension, which gives incredible coverage and flexibility to users.

CVL28 uses legendary JBL driver and delivers extraordinary performance, ultra-high efficiency and wide horizontal coverage range. CVL28 is a compact box that consists of two 8-inch low-frequency loudspeakers and one 3-inch titanium-film compression tweeter unit. CVL28 also provides a set of easy-to-use rigging system to simplify deployment. The system is compact, lightweight, easy to lift, and can be installed and system with CVL18S.

Up to eight CVL28 speakers can be suspended, and the number and coverage angle can be adjusted according to the specific use cases. For vertical direction, the coverage angle can be adjusted between 0° and 12°.

Tech Innovation

CVL28 uses a 3-inch JBL2432H-1 high-frequency unit and two 8-inch low-frequency unit for higher sound level output, lower distortion, and good low-frequency expansion.

Dual-channel Symmetrical Design

CVL28 adopts dual-channel symmetrical design, and is a passive line-array loudspeaker that can be system configured as bi-amp or passive mode.

Spare Part Information

5 X M8 16 mm stainless steel screw

3 X 4-pin interface Phoenix plug

Note: Please install with fitting screws when hoisting

4.2 CVL18S Passive Line array Subwoofer

The 18-inch passive ultra-low frequency loudspeaker CVL18S provides excellent bass performance for small and medium-sized venues. CVL18S aims to deliver quality audio experience in facilities including multi-function halls, stadiums, banquet halls and more. CVL18S can be mounted by suspending above ground or operated in ground stack.

CVL18S is equipped with an 18-inch high-power low-frequency woofer that ensures lower distortion and consistent output over a large dynamic range and under high loud pressure.

With black DuraFlex™ coating, CVL18S is compact, lightweight and easy to assemble, and can be system with the CVL28 to support up to eight loudspeakers for different uses.

Tech Innovation

CVL18S can achieve lower distortion and low-frequency expansion. With DuraFlex™ coating, CVL18S looks elegant and its appearance doesn't wear out easily.

Simple Rigging

CVL18S rigging system is easy to use and can be installed quickly. It can be easily connected with CVL28, which can be easily bound and adjusted to a specific angle with a single pin.

Spare Part Information

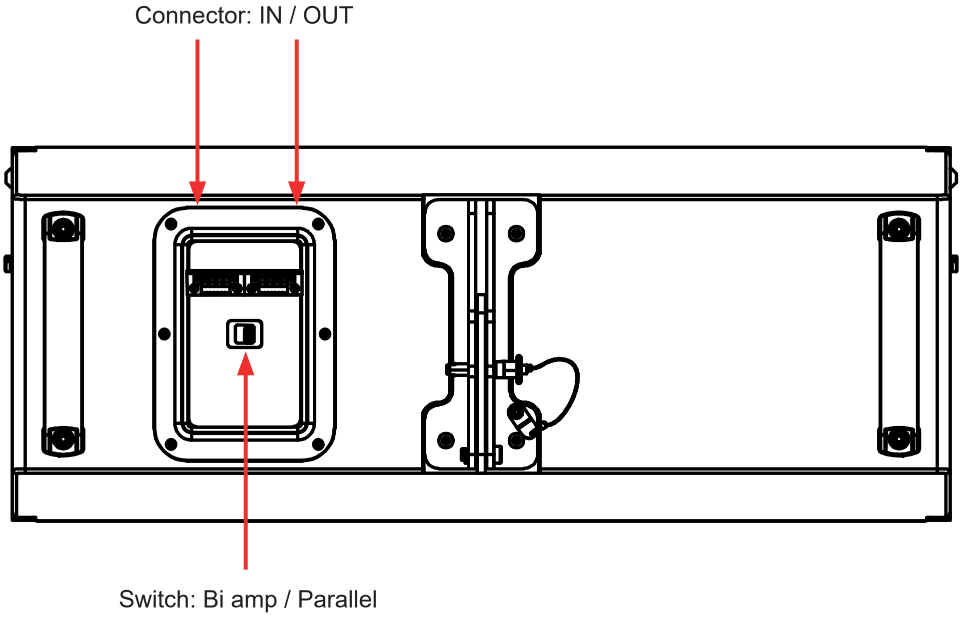
9 X M8 22 mm stainless steel screw

3 X 4-pin interface Phoenix plug

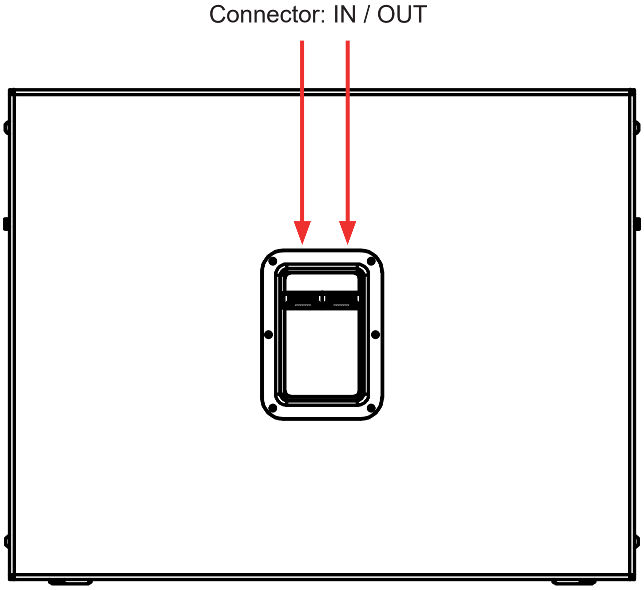
Note: Please install with fitting screws when hoisting

5 – CONNECTIONS

1. JBL CVL28 is equipped with two 4-pin Phoenix plug connectors. The connectors are connected in parallel and can be used as system inputs or as straight-through connections to daisy-chain multiple loudspeakers. Phoenix plug connector, mounted on the left side of the back, can be picked up from the accessory pack by the user. This means the user can see the location of the locking pin from a place that is below the array.



2. JBL CVL18S is equipped with two 4-pin Phoenix connectors located at the rear of the cabinet. All connectors connect in parallel and can be used interchangeably. Spare connectors can be found in the accessory pack provided.



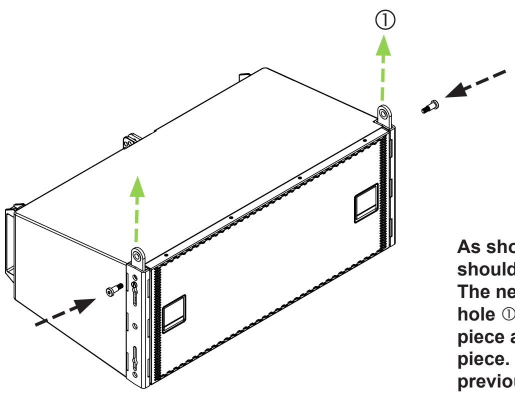
6 – CVL28 Rigging Setting

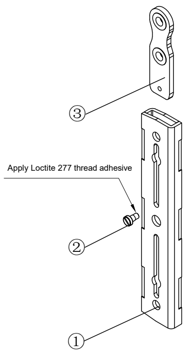
CVL28 series is a line-array loudspeaker designed for fixed installation. Stainless steel screws are used for stability. Each loudspeaker package comes with an accessory pack for hoisting screws used in loudspeaker. The screws are sprayed with anti-loosening glue, which should be used when hoisting, to replace the black screws which are used only for transportation purpose. The back is equipped with a link piece for adjusting the vertical angle, and is fixed with a quick bolt. The angle can be adjusted to 12° at maximum and a maximum of 8 pieces can be hoisted together.

The specific operation is shown in the following picture:

CVL28 full range line-array loudspeaker

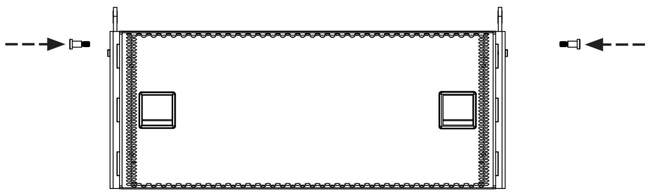
As shown by the direction of the black arrow in the following picture, first adjust the link piece to the appropriate position, and use the M8 x 16mm stainless steel screw in the accessory pack for fastening. The other loudspeaker should be connected along the direction of the green arrow ①, and be fastened with stainless steel screw.



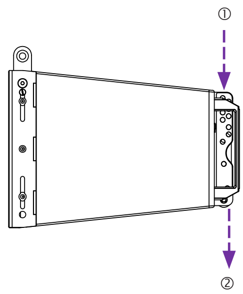


As shown in the above picture, the rigging should be disassembled in the following manner: The next loudspeaker should be fastened on hole ①. ② should be used to fasten the link piece at the appropriate position and slid the link piece. ③ is the link piece that connects with the previous loudspeaker.

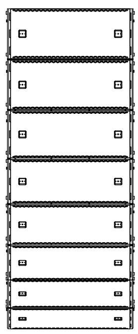
After completing the previous step, complete the connection with the link piece along the direction of the purple arrow. ① is used to connect with the back link piece of the previous loudspeaker, and ② is used to connect with the next loudspeaker. You can adjust toward the appropriate vertical radiation angle according to the angle scale of the back rigging.

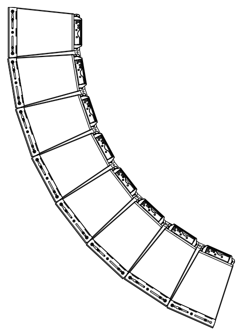


Front view of CVL28 full-frequency line-array



Side view of CVL28 full-frequency line-array



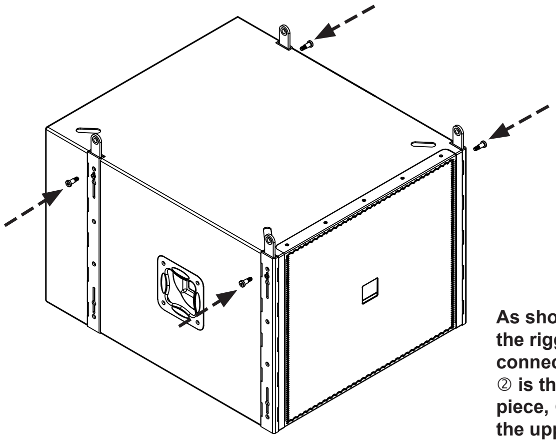


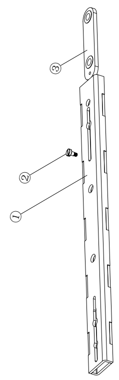
7 – CVL18S Rigging Setting

CVL18S series is a line-array subwoofer designed for fixed installation. Stainless steel screws are used for stability. Each subwoofer package comes with an accessory pack for hoisting screws used in subwoofer. The screws are sprayed with anti-loosening glue, which should be used when hoisting, to replace the black screws which are used only for transportation purpose. It can be system with CVL28 to form a complete line-array sound reinforcement system. CVL18S supports a maximum of 4 independent hoistings. When system with full range speakers, a maximum of 8 pieces can be hoisted together.

The specific operation is shown in the following picture:

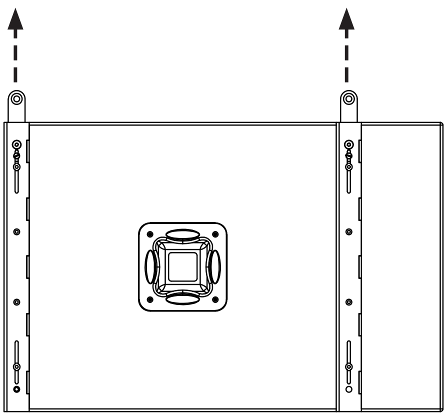
CVL18S supports independent hoisting, as shown by the direction of the black arrow. First remove the screw that fixes the link piece, adjust the link piece to the appropriate position, and use the stainless steel screw in the accessory pack for fastening (M8 x 22mm). After completing these steps, the subwoofer or a third-party installation support can be connected with the top of the link piece.





As shown in the above picture, ① is the rigging. The lower hole is used to connect with the next loudspeaker. ② is the sliding screw of the link piece, ③ is used to connect and fasten the upper/lower loudspeakers.

After completing these steps, as shown by the arrow direction, connect the previous loudspeaker or the third-party fixed installation support;



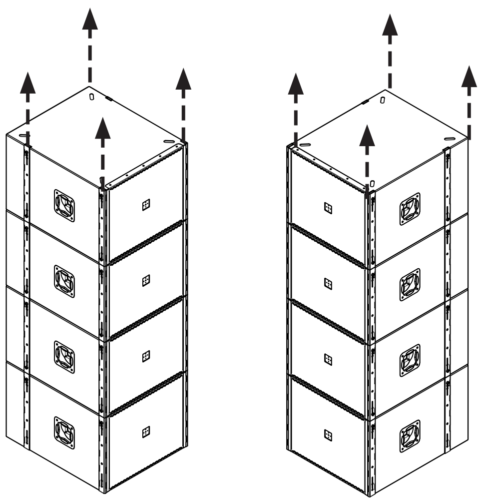


Diagram for Installation of Low-Frequency Loudspeaker

8 – CVL28 CVLINK Series TECHNICAL SPECIFICATIONS

CVL28 Passive Line-array Full Range Speaker

System type	Dual 8" passive line array loudspeaker
Frequency Range (-10 dB)[1]:	90 Hz - 20 kHz
Frequency Range (±3 dB)[1]:	140 Hz - 20 kHz
Coverage Angle:	110° x 12°
Horizontal:	110°
Vertical:	12°
Rated Input Power[3]:	400W / 800W / 1600W (Continuous / Music / Peak)
Rated Impedance:	8 ohms
Sensitivity (1w@1m)[1]:	101 dB
Maximum SPL[2]:	127 dB continuous, 139 dB peak
Transducers	
Low Frequency Driver:	2 x 8" LF driver
High Frequency Driver:	HF: JBL 2432H-1, 3" titanium compression HF driver
Appearance	
Box Structure:	15 mm poplar plywood, fitted with a handle, and black DuraFlex™ finish for the appearance color
Suspension:	Stainless steel screw fixation, left and right suspension rigging, back adjustment angle bracket
Inter-enclosure Angle:	0, 1, 2, 3, 4, 5, 6, 8, 10 and 12°
Grille:	1.5 mm perforated iron mesh, with acoustically transparent black cloth backing
Connector:	2 x Phoenix plug in parallel or loop-thru (Selectable Bi-amp and Passive modes)
Type:	2 x Phoenix Terminals
Pin Assignments:	Bi-amp low frequency: 1+, 1-, high frequency: 2+ 2-, Passive full range: 1+, 1-
Dimension (H x W x D):	262.8 x 662 x 387.2 mm
Net Weight:	23 kg

Footnotes:

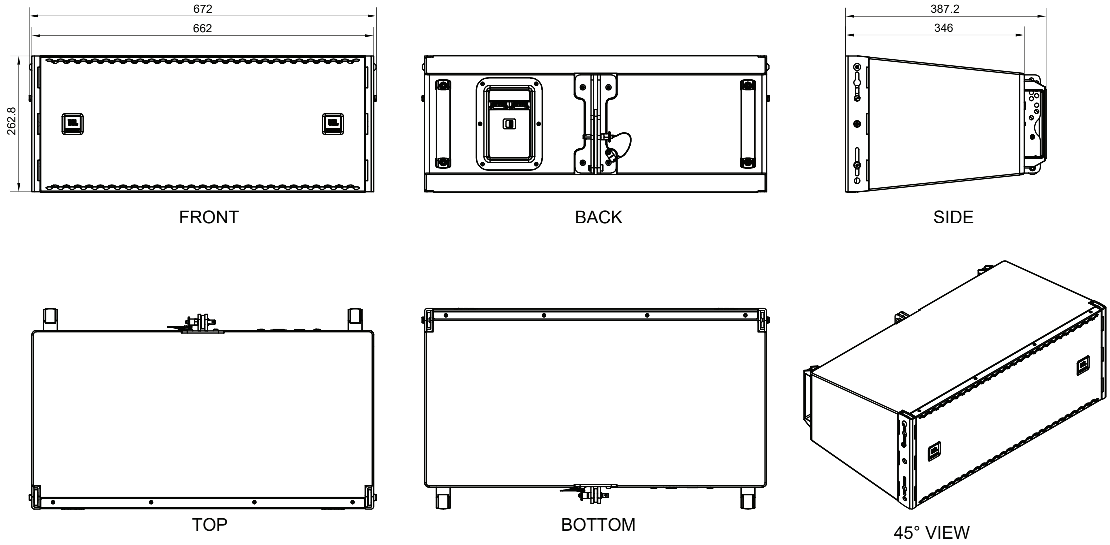
1: Measured in a full space (4π) condition.

2: Peak, unweighted SPL, measured under full-space conditions at 1 meter using broadband pink noise with a 12dB crest factor.

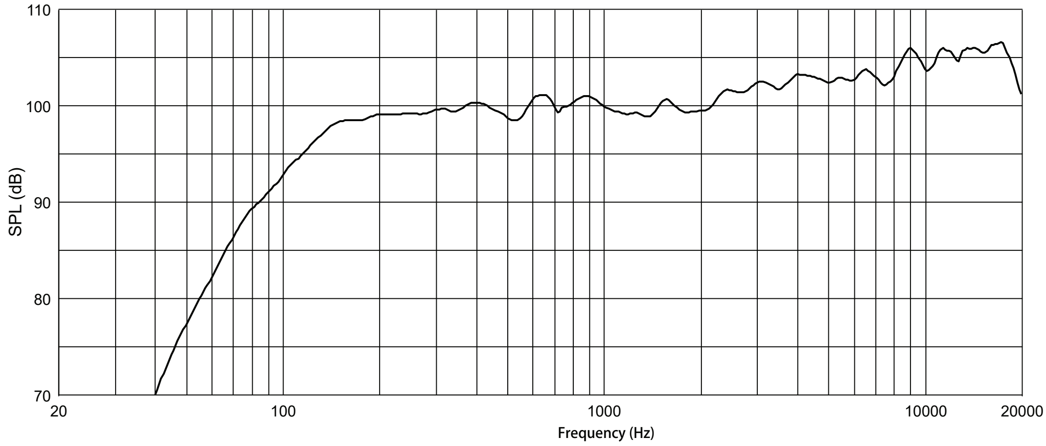
3: According to IEC standard, tested for 2 hours under pink noises with a crest factor of 6 dB.

JBL continually engages in research related to product improvement. Some materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description but will always equal or exceed the original design specifications unless otherwise stated.

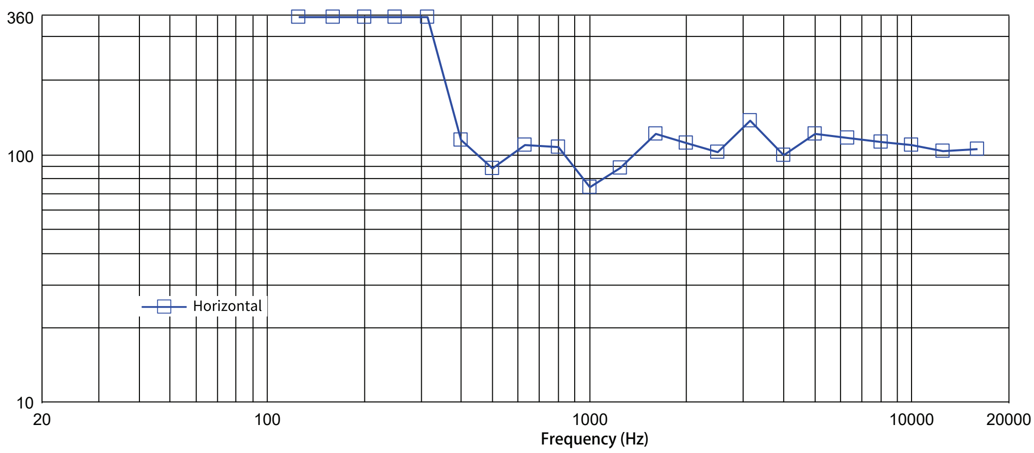
Engineering Drawing



Frequency Response



Horizontal Polarity Diagram



9 – CVL18S CVLINK Series TECHNICAL SPECIFICATIONS

CVL18S Passive Subwoofer Loudspeaker

System type	18" passive subwoofer
Frequency Range (-10 dB)[1]:	38 Hz - 300 Hz
Frequency Range (±3 dB)[1]:	44 Hz - 180 Hz
Rated Input Power[3]:	1000W / 2000W / 4000W (Continuous / Music / Peak)
Rated Impedance:	8 ohms
Sensitivity (1w@1m)[1]:	101 dB
Maximum Output[2]:	131 dB continuous, 143 dB peak
Transducers	
Low Frequency Driver:	1 x 18" LF driver
Appearance	
Box Structure:	18mm poplar plywood, fitted with a handle, and black DuraFlex™ finish
Suspension:	Stainless steel screw fixation left and right. Suspension rigging
Grille:	1.8 mm perforated iron mesh, with acoustically transparent black cloth backing
Connector:	2 x Phoenix plugs parallel or loop-thru
Type:	2 x Phoenix Terminals
Pin Assignments:	Low Frequency: 1+, 1-
Dimension (H x W x D):	518 x 662 x 786 mm
Net Weight:	54 kg

Footnotes:

1: Measured in a half space (2π) condition.

2: Peak, unweighted SPL, measured under half-space conditions at 1 meter using broadband pink noise with a 12dB crest factor.

3: According to IEC standard, tested for 2 hours under pink noises with a crest factor of 6 dB.

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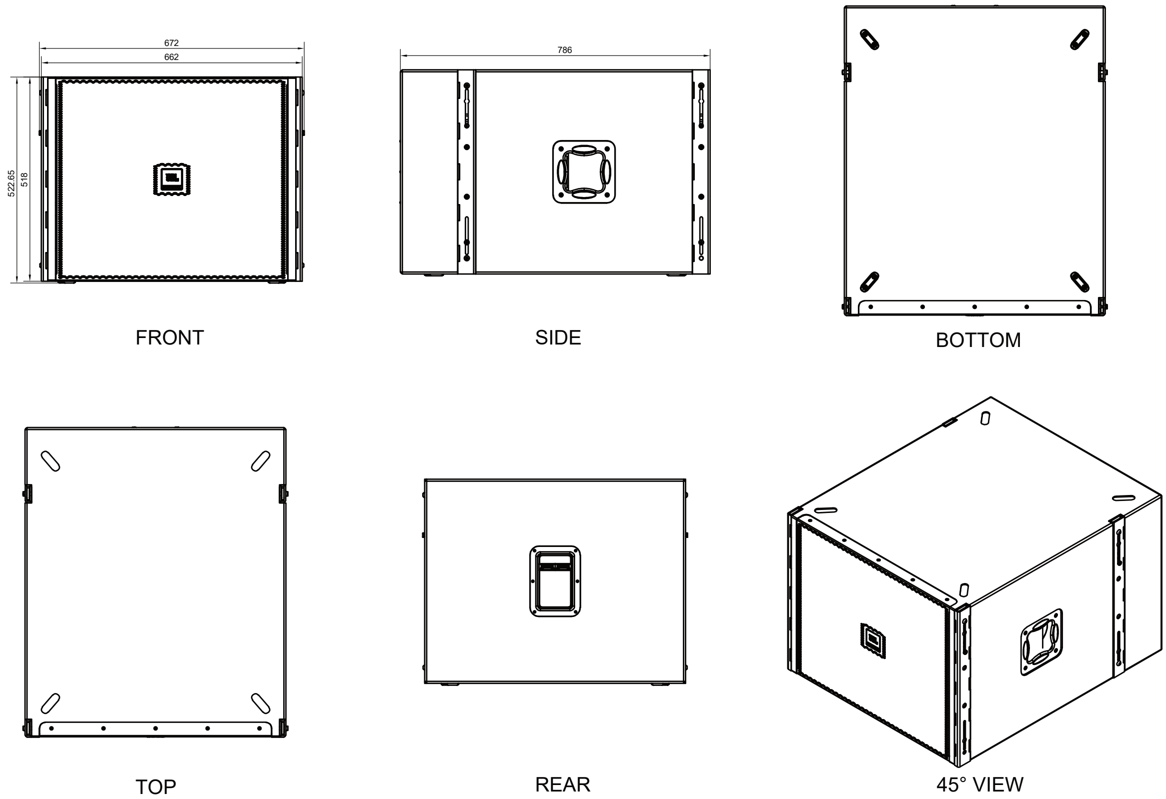
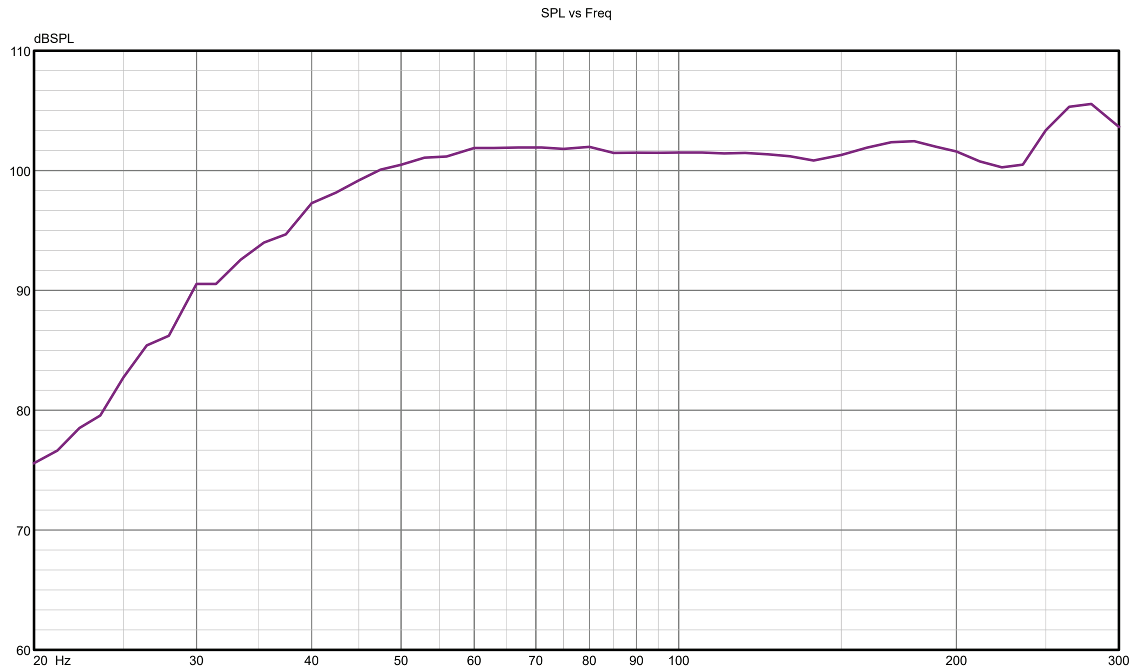


Frequency Response



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