LS6593v2 Ribbon Line Array System
Owners Manual

SUPERIOR LISTENING SYSTEMS
AUDIO CLARITY REDEFINED

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Introduction

Thank you for your purchase of the LS6593v2, one of the most advanced line array products available today. It is our goal to make the installation and use of this technology as simple as possible. This manual serves as a feature overview and provides useful hints regarding array construction. Please read in its entirety before using or mounting the LS6593v2.

Safety Responsibilities and Liability

All information in this guide is meant only for the purpose of using the SLS supplied mounting equipment. All other rigging and/or structure support including wall securing hardware is considered part of the venue and/or end-user supplied equipment and is not addressed in this guide. SLS assumes that a working knowledge of accepted rigging practices and safety will be applied to all rigging materials and practices employed. This guide is not a comprehensive source for rigging in general. The user must assume all responsibility for the appropriate use of SLS supplied rigging hardware and follow at a minimum all applicable laws and regulations in force for each venue.

The weakest component determines the safety of the entire rigging assembly. Prior to securing the array, always inspect all hardware components for wear, deformations, corrosion and missing or damaged parts. Also confirm that the venue attachment points are suitably load rated for the array.

No information contained in this guide is intended as a warranty on the part of SLS. Anyone using this information assumes all liability arising from it's use. Product abuse, use of the product not in accordance with SLS instructions or use in an application which the product has not been designed for is not covered under any SLS warranty nor is SLS liable for any loss or damage.

Users in other countries should not assume that local regulations are based upon North American practices. Users should consult with local regulatory authorities for specific codes and/or guidelines.

Replacement Parts

All defective components should be replaced with an SLS approved part. Contact the factory directly at (417) 883-4549 to obtain approved replacement parts. SLS is not responsible for problems caused by using non SLS supplied parts.

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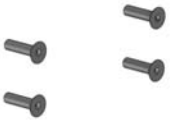
Using the Included Coupling Plates for Assembling Columns

Use the (8) included M6 metric screws to attach the plates for coupling the LS6593v2's together.



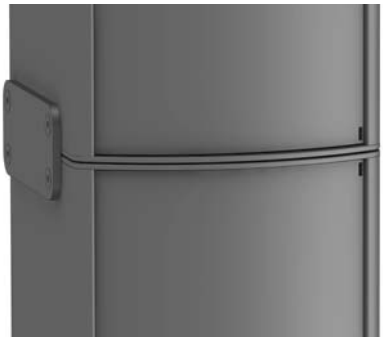
Note!

Since every LS6593v2 is packaged with a pair of coupling plates, you will always end up with an extra pair. If overhead suspension is necessary, use the extra pair on the top box in the column for rig points.

Never use the M6 cabinet inserts directly as rigging points. Cabinet damage may occur!

Rigging plate hole diameter (6.5mm) will be compatible with a 1/8" Quick Link (not included). Confirm that the Quick Link is load rated for the weight being suspended.

Grill Removal for Servicing



In the event that you need to access the drivers once the LS6593v2 is assembled in an array, there are slots in the grill for this purpose. Using a leverage tool inserted into the grill openings, the grill may be gently pried off.

Each LS6593v2 has two grill slots, one top and one bottom.

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Converting the LS6593v2 between Passive and Bi-Amp Operation

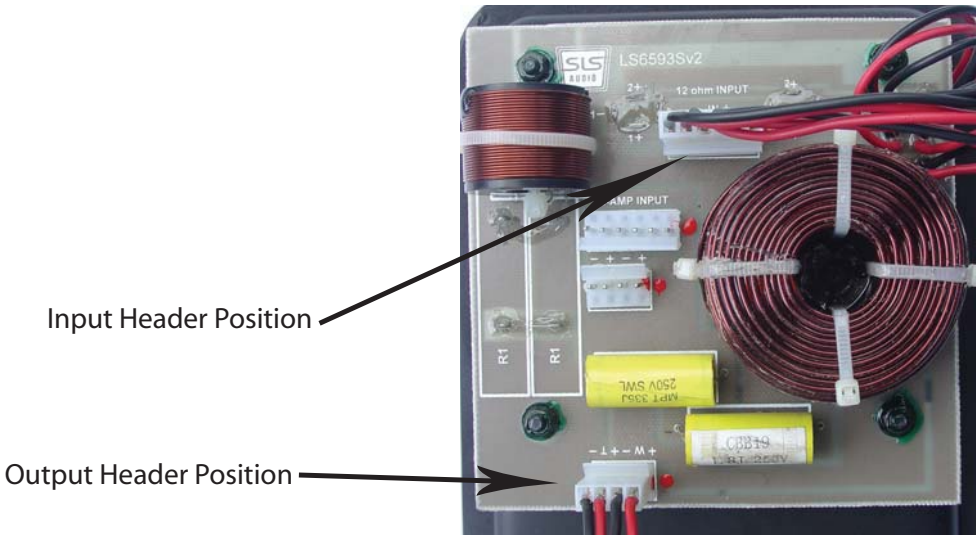
1. Remove the rear input plate

2. Turn the plate over and find the position of the two headers that are plugged into the crossover board.

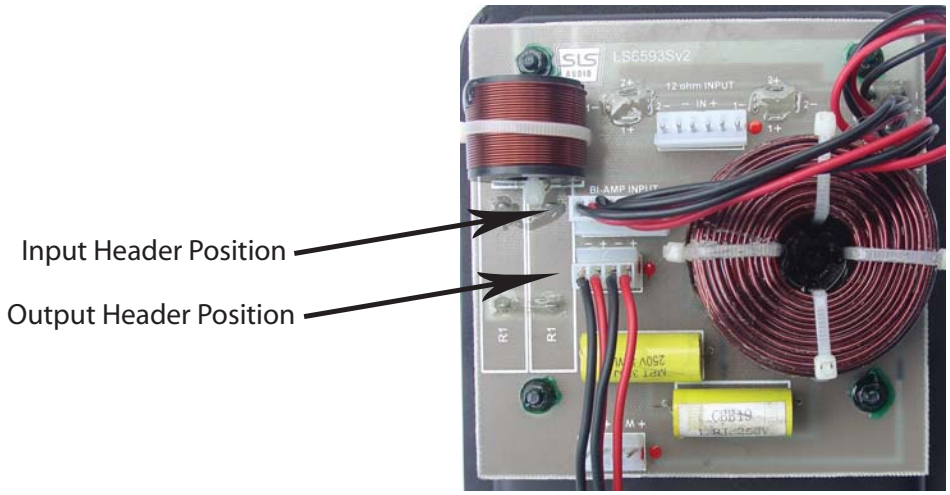
3. Change both headers to the positions as shown below for the desired operation mode. **Changing only one of the headers will result in no output from the speaker.**

4. Replace the rear input plate

Passive Configuration (default)



Bi-Amp Configuration



Note!

In bi-amp mode, please download the latest processor settings from the website for optimum sound quality and driver protection

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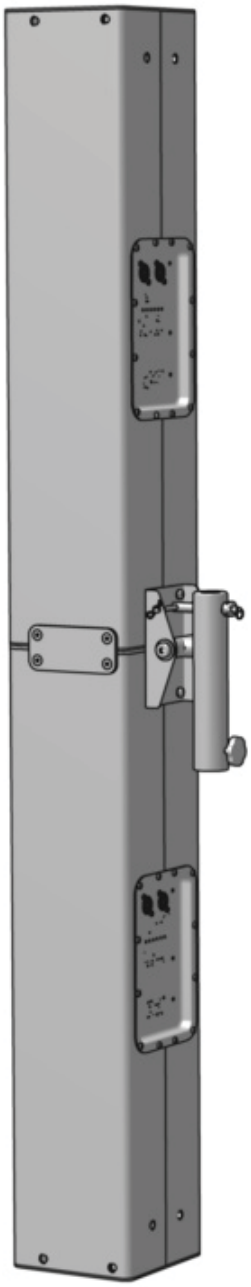
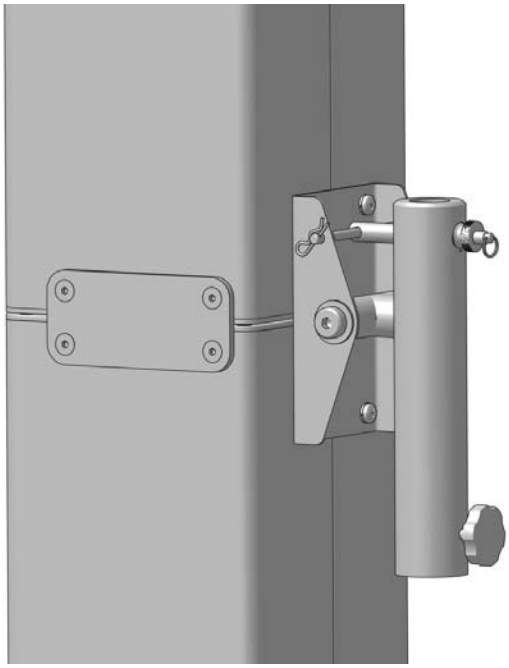
Using the Optional Pole Mount Bracket

The optional “POLE.LS6593v2” pole mount bracket will mount two units on a standard speaker stand using the back rigging points of the speaker. **The mount will provide proper support for 2 units only.**

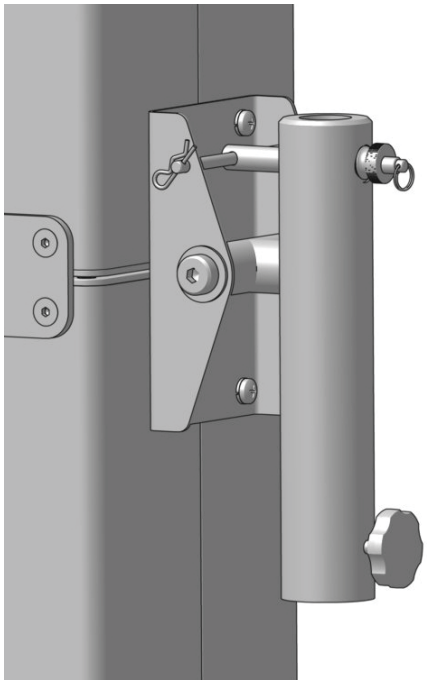
The mount provides for precise down angle and up angle adjustments required for proper coverage. A good starting point for placement (for a flat coverage area) is putting the top of the column at 9.25ft (2.82m) with a 2 degree down angle relative to the seating plane.





Assemble speakers together as shown using the SLS supplied hardware then place on speaker stand

Down angle and Up angle adjustments are accomplished by turning this screw head. Mount is shown in the 0 degree position.



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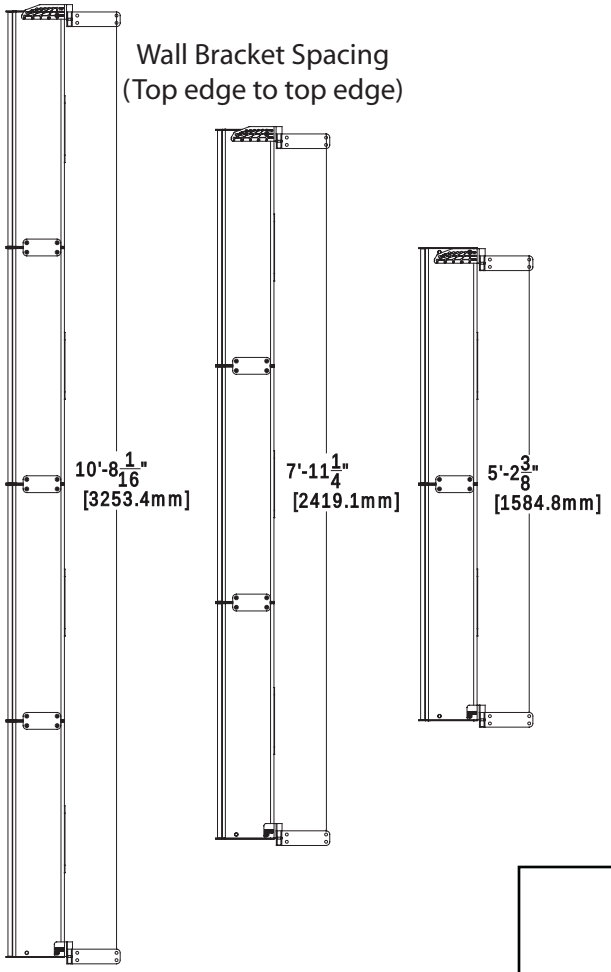
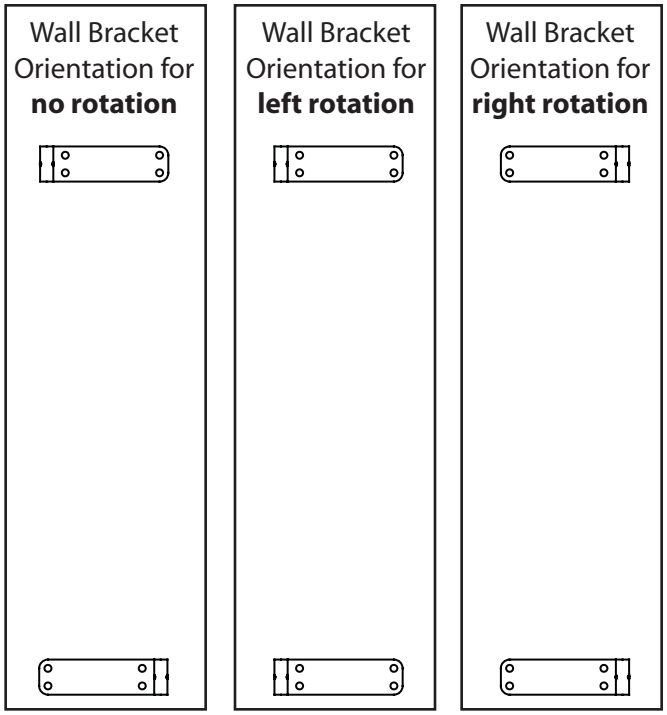
Using the Optional Wall Attachment Kit

1. Determine the spacing needed between the top and bottom wall brackets based on how many LS6593v2 units are in the column. The dimensioning shown is from the top of each wall bracket.

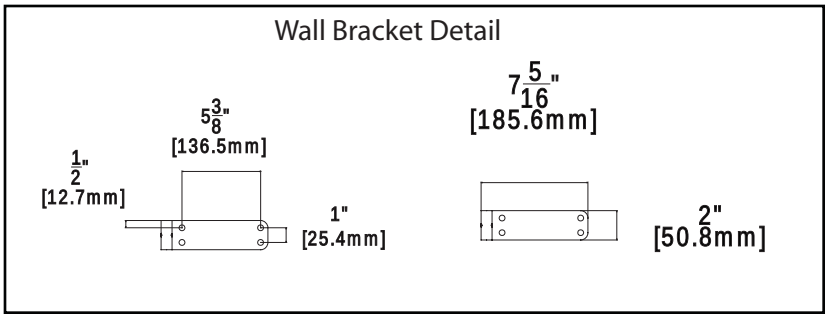
IMPORTANT! If the entire column needs to be rotated to the left once installed, install the wall brackets so the attachment points are on the left side. If the array needs to be rotated to the right, install the wall brackets so the attachment points are on the right side. If the array does not need to rotated, install the top wall bracket to the left and the bottom wall bracket to the right. This will "lock" the array into a straight position without relying on a set screw to maintain position.

2. Assemble the LS6593v2 units into the column using the supplied coupling plates.

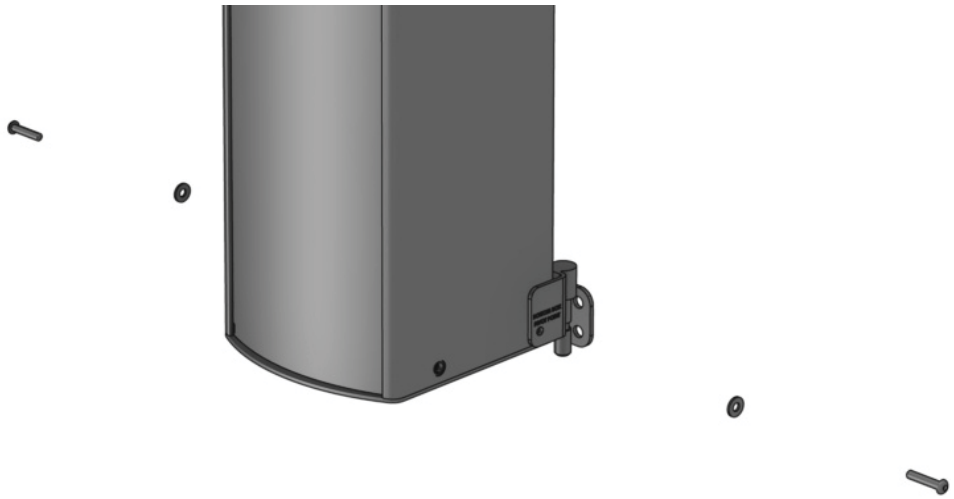




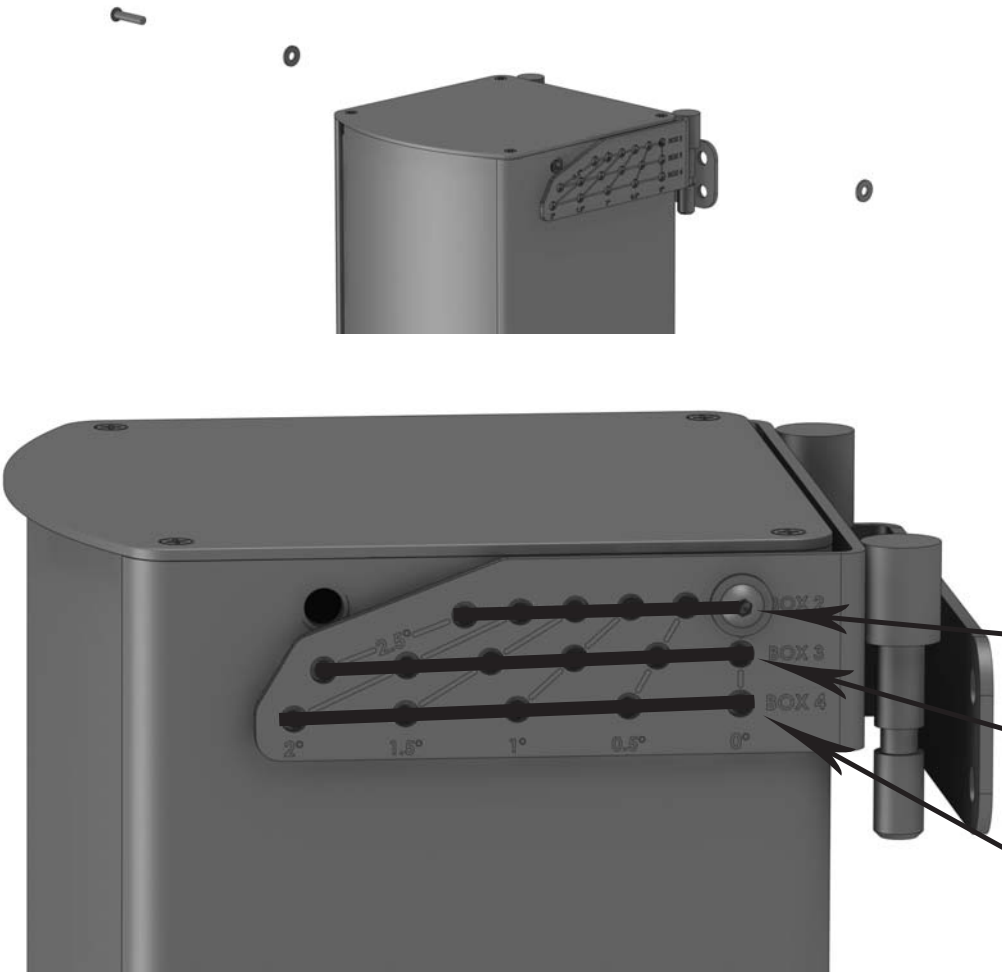
The LS6593v2 speakers shown are rotated horizontally 90 degrees to the left in order to show the bracket spacing on the wall



3. Install the bottom bracket on the bottom LS6593v2 in the array as shown. Leave it slightly loose if the column is going to have any down angle so it can be used as a rotation point.



4. Install the top bracket on the top LS6593v2 in the array. Determine the appropriate attachment point by how many boxes are in the column, then on the desired down angle of the entire column.



Note!

With a column greater then 2 boxes, the top bracket will extend slightly above the top of the top box in the column

Attach to any point here for 2 boxes
0 to 2.5 degrees downangle

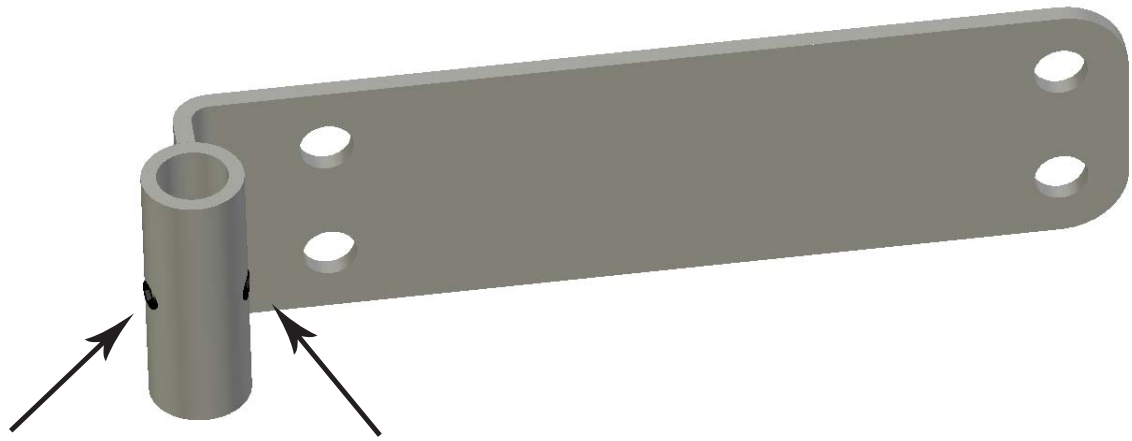
Attach to any point here for 3 boxes
0 to 2.5 degrees downangle

Attach to any point here for 4 boxes
0 to 2 degrees downangle

5. Lift the entire assembled LS6593v2 column and gently place onto the wall brackets already attached to the wall surface. Only two of the four posts on the back of the column will drop into the wall bracket holes. Tighten the bottom bracket to the speaker (used as the rotation point).

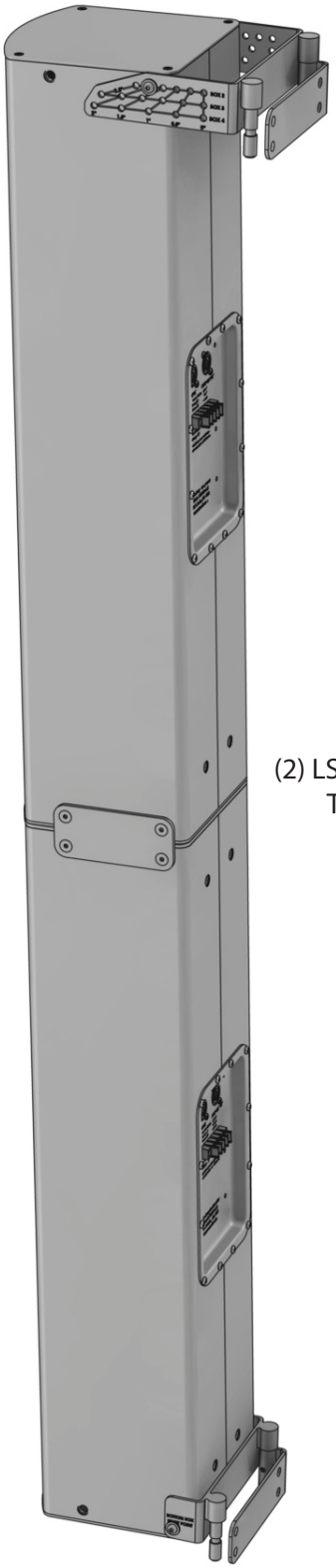
This post is not used. This example column will rotate to the left only.

6. Rotate the column horizontally into the desired position and tighten both set screws on the top and the bottom (4 total set screws).

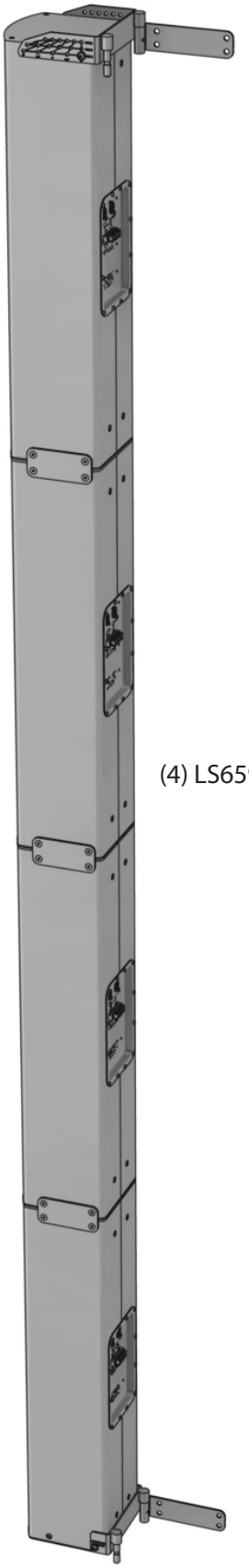


Location of set screws on both the top and bottom wall plates

Typical Examples



(2) LS6593v2 with a 2 degree down angle
This array could rotate to the left



(4) LS6593v2 rotated 90 degrees

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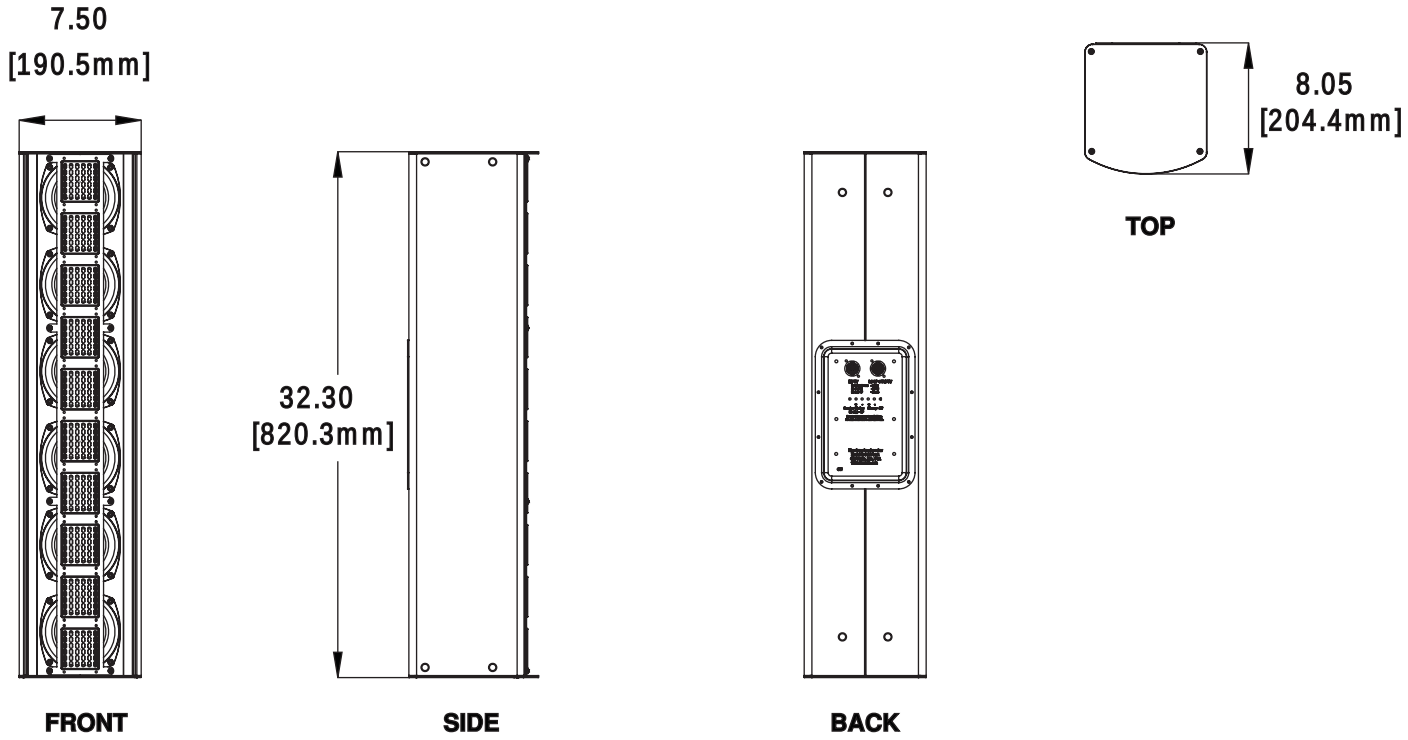
LS6593v2 Specifications



Product Specifications	
Operating Range [1]	80Hz - 20,000Hz
Sensitivity (1W/1M) - Passive. [2]	94dB
Low Freq.	93dB
High Freq.	107dB
Horizontal Coverage Angle -6dB [3]	100 Degrees
Vertical Coverage Angle	Defined by the height of the array
Power Handling - Low Freq/Passive [4]	300W (60 Volts) AES/2
High Freq.	300W (76 Volts) AES/2
Recommended Amp Power for Max Output	
Low Freq/Passive	900 Watts @ 8 ohms
High Freq.	900 Watts @ 8 ohms
Max SPL (calculated) 1 Meter - Passive [5]	119dB Cont. / 125dB Peak
Low Freq.	118dB Cont. / 124dB Peak
High Freq.	132dB Cont. / 138dB Peak
Nominal Impedance - Low Freq/Passive	12 Ohms
High Freq.	20 Ohms
Crossover Frequency	1,500Hz (Passive Mode)
Transducers - Low Freq.	5.25" Woofers x 6
High Freq.	PRD250 Ribbons x 10
Input	NL4 x 2 Barrier Strip x 1
Dimensions	32.3" (82cm) H
	7.5" (19.1cm) W
	8.05" (20.4cm) D
Enclosure	Extruded Aluminum
Weight	34.5lbs (15.7kg) Shipping 42lbs (19kg)
Rigging	12 Points M6 threaded inserts
Optional Accessories	TRANS-LS6593v2 70V 60W xformer
	BRKT-LS6593v2 Wall Mount Bracket
	POLE-LS6593v2 Pole Mount Adaptor
Finish Options	Black Powder Coat
	White Powder Coat

1. LF at -10dB, HF -6dB at 40kHz on-axis however response above 20kHz is limited by air absorption and DSP sampling rates in typical PA applications.
2. Full bandwidth pink noise is applied and amplified to a level and measured at the loudspeaker terminals - corresponding to 1 Watt as referenced to the loudspeakers nominal impedance. SPL is measured in an anechoic environment in the loudspeakers far field. Data is extrapolated to 1 Meters distance from the loudspeaker. Predicting SPL at distance using inverse square law calculations will produce inaccurate results. Use our free LASS software to predict system SPL.
3. Averaged from 1000Hz to 10kHz
4. AES established with ambient temperature at 22C in accordance with AES/2-1984 standard. IEC stated in RMS voltage according to IEC 268-5
5. Typical SPL for one box only, for array SPL refer to LASS calculations.