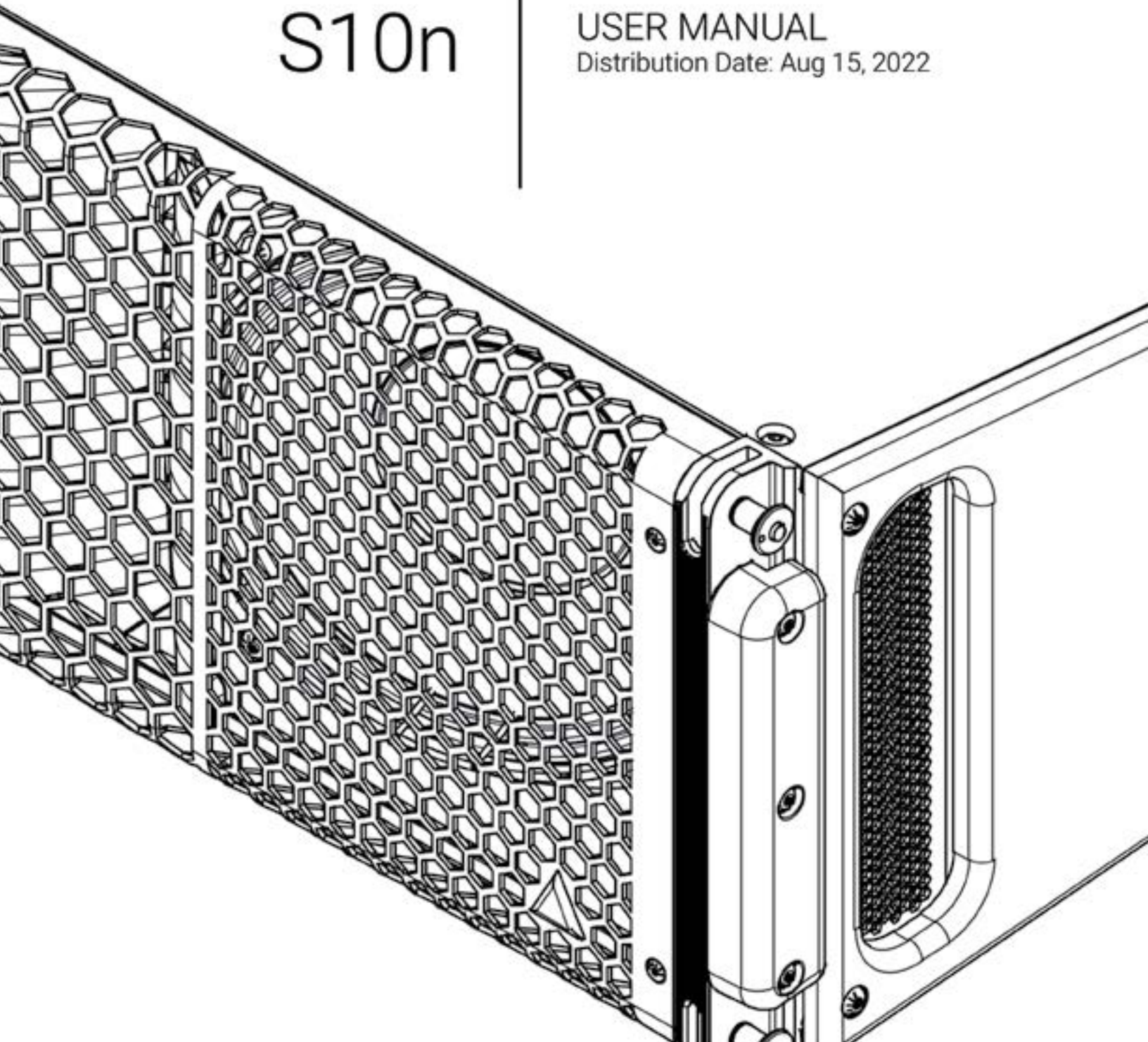


S10n

USER MANUAL

Distribution Date: Aug 15, 2022



# S10 User Manual

Distribution Date: August 15, 2022

Copyright 2022 by Adamson Systems Engineering Inc.; all rights reserved

This manual must be accessible to the person operating this product. As such, the product owner must store it in a safe place and make it available upon request to any operator.

This manual can be downloaded from

<https://adamsonsystems.com/support/downloads-directory/s-series/S10n>

## Declarations

### EU Declaration of Conformity

Adamson Systems Engineering declares that the products stated below are in conformance with the relevant fundamental health and safety criteria of the applicable EC Directive(s), in particular:

**Directive 2014/35/EU: Low Voltage Directive**  
973-0005 S10n

**Directive 2006/42/EC: Machinery Directive**  
930-0020 Sub-Compact Support Frame  
930-0021 Extended Beam  
930-0033 Moving Point Extended Beam  
931-0010 Sub-Compact Underhang Adapter Kit  
932-0035 S10 Lifting Plate with 2 Pin  
932-0043 Extended Lifting Plates  
932-0047 Line Array H-Clamp



Signed at Port Perry, ON, CA - August 15, 2022

A handwritten signature in blue ink, appearing to read 'Brock Adamson', is written over a horizontal dashed line.

Brock Adamson (President & CEO)

**ADAMSON SYSTEMS ENGINEERING, Inc.**  
1401 Scugog Line 6  
Port Perry, Ontario, Canada  
L9L 0C3  
T: +1 905 982 0520, F: +1 905 982 0609  
Email: [info@adamsonsystems.com](mailto:info@adamsonsystems.com)  
Website: [www.adamsonsystems.com](http://www.adamsonsystems.com)

# Table of Contents

1.	<a href="#">Safety &amp; Warnings</a>	3
2.	<a href="#">Product Introduction</a>	4
3.	<a href="#">Wiring</a>	5
4.	<a href="#">Amplification</a>	6
5.	<a href="#">Presets &amp; Control</a>	7
6.	<a href="#">Technical Data</a>	8
7.	<a href="#">Accessories</a>	9

## Safety & Warnings



Read these instructions, keep them available for reference.

This manual can be downloaded from

<https://adamsonsystems.com/support/downloads-directory/s-series/S10n>



Heed all warnings and follow all instructions.



A qualified technician must be present during the installation and use of this product. This product is capable of producing extremely high sound pressure levels and should be used according to the specified local sound level regulations and good judgement. Adamson Systems Engineering will not be liable for damages caused by any possible misuse of this product.



Servicing is required when the loudspeaker has been damaged in any way, such as when the loudspeaker has been dropped; or when for undetermined reasons the loudspeaker does not operate normally. Inspect your products regularly for any visual or functionality irregularities.

Protect the cabling from being walked on or pinched.

View the S-Series Rigging Tutorial video and/or read the S-Series Rigging Manual before suspending the product.

Pay attention to rigging instructions included in both Blueprint and the S-Series Rigging Manual.

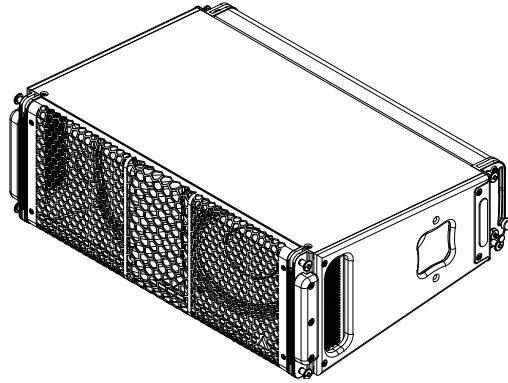
Use only with the rigging frames/accessories specified by Adamson, or sold with the loudspeaker system.

This speaker enclosure is capable of creating a strong magnetic field. Please use caution around the enclosure with data storage devices such as hard drives.

In an effort to continuously improve its products, Adamson releases updated accompanying software, presets and standards for its products. **Adamson reserves the right to change the specifications of its products and the content of its documents with no prior notice.**

# S10n

## S10n Sub Compact Line Array



- The S10n is a sub-compact, 2-way, full range line array enclosure designed for extended throw capabilities. It contains two symmetrically arrayed 10" transducers and a 4" compression driver mounted on an Adamson waveguide.
- Up to 20 S10n can be flown in the same array when using the S10 & S119 Support Frame (930-0020).
- Due to the use of Controlled Summation Technology, the S10n maintains a consistent nominal horizontal dispersion pattern of 80°.
- The high frequency waveguide is designed to couple multiple cabinets across the entire intended frequency band without loss of coherence.
- There are 9 rigging positions available, spanning 0° to 10°. Always consult Blueprint AV™ and the S-Series Rigging Manual for correct rigging positions and rigging instructions.
- Adamson's use of proprietary technologies such as Controlled Summation Technology and Advanced Cone Architecture give the S10n an extremely high maximum SPL level of 141.3 dB.
- The nominal impedance of the S10n is 8  $\Omega$  per band.
- The operational frequency range of the S10n is 60Hz to 18kHz, +/- 3 dB.
- The S10n is intended to be used as a standalone system or with other S-Series products. The S10n is designed to pair easily and coherently with all Adamson subwoofers.
- The wooden enclosure is made of marine grade birch plywood, and has an aluminum and steel rigging system mounted on each corner. Without sacrificing low resonance to composite material, the S10n is able to maintain a low weight of 27 kg / 60 lbs.
- The S10n is designed for use with Lab.gruppen's PLM+ Series amplifiers.

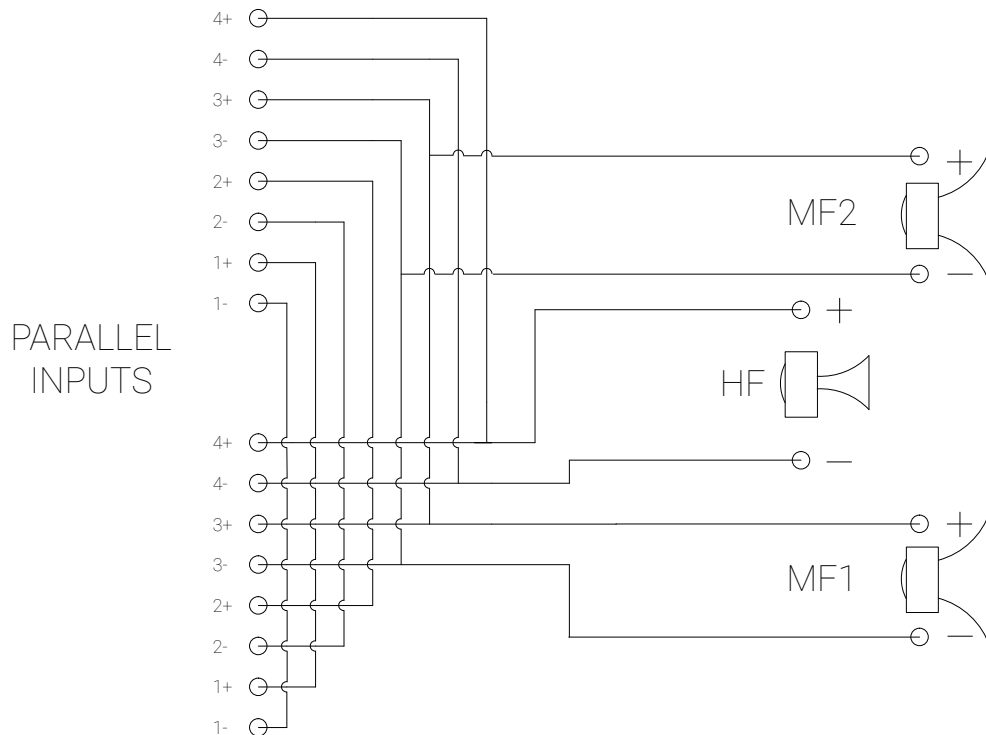
# S10n

## Wiring

- The **S10n (973-0005)** comes with 2x Neutrik Speakon™ NL8 connections, wired in parallel.
- Pins 3+/- are connected to the 2x ND10-LM MF transducers, wired in parallel.
- Pins 4+/- are connected to the NH4TA2 HF transducer.
- Pins 1+/- and 2+/- are not connected.



S10n Jackplate



S10n Internal Wiring

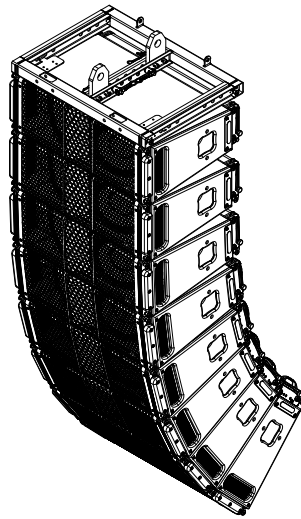
# S10n

## Amplification

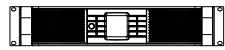
The S10n is paired with Lab Gruppen **PLM+ Series** amplifiers.

Maximum quantities of the S10n, or S10n paired with S119 per amplifier model are shown below.

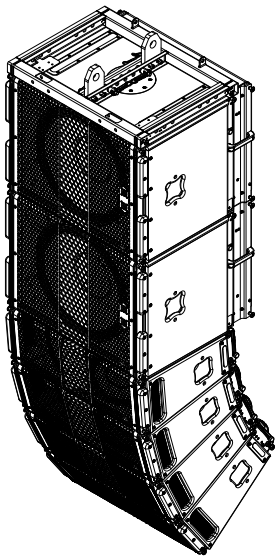
For a master list, please refer to the Adamson Amplification Chart, found [here](#), on the Adamson website.



4x S10n per circuit  
8x S10n per amplifier



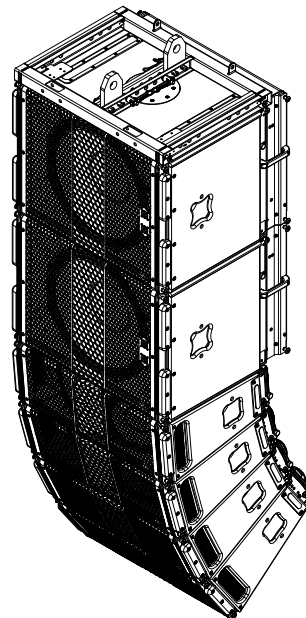
PLM 12K44/20K44



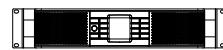
4x S10n per circuit / 2x S119 per circuit  
4x S10n, 2x S119 per amplifier



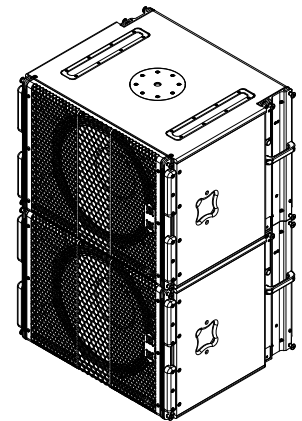
PLM 12K44



4x S10n per circuit / 2x S119 per circuit  
4x S10n, 4x S119 per amplifier



PLM 20K44



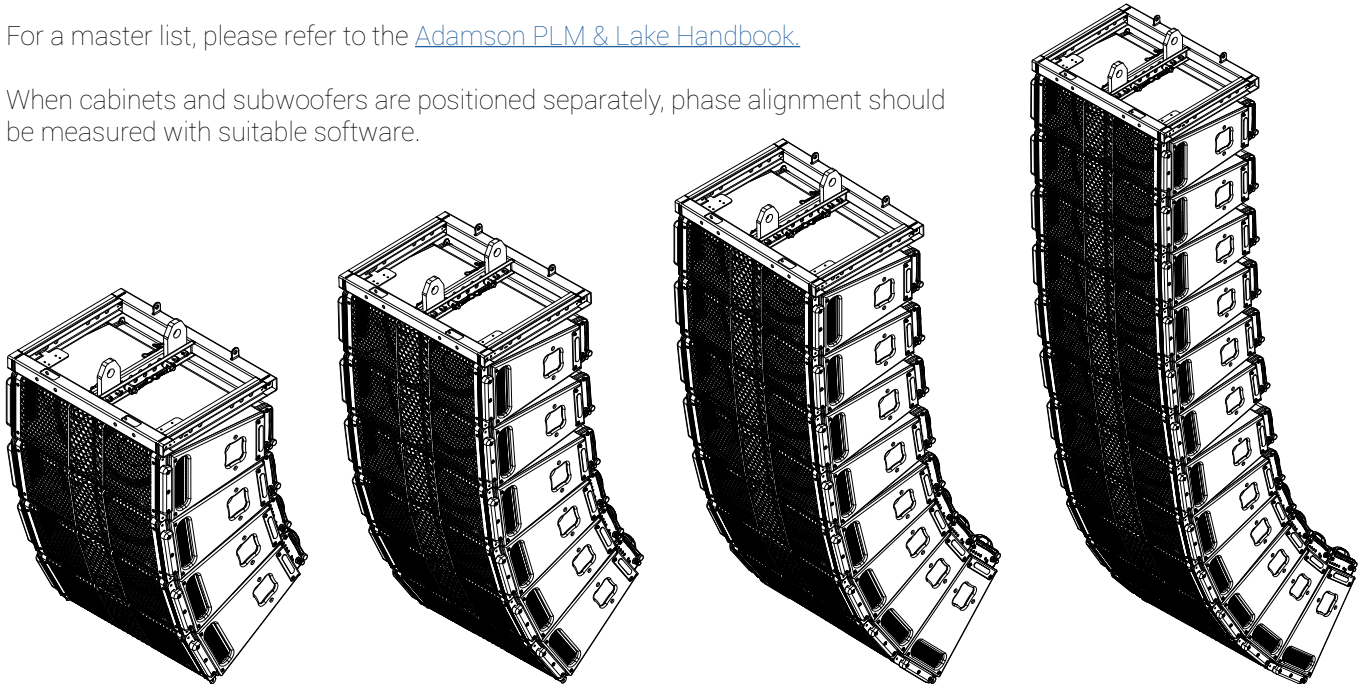
# S10n

## Presets

The [Adamson Load Library](#), contains presets designed for a variety of S10n applications. Each preset is intended to be phase-aligned within the EQ overlap region with Adamson subwoofers.

For a master list, please refer to the [Adamson PLM & Lake Handbook](#).

When cabinets and subwoofers are positioned separately, phase alignment should be measured with suitable software.



**S10n Compact**  
*Intended for use with an array of 4 S10n over 2 or 3 subs*

**S10n Short**  
*Intended for use with an array of 5-6 S10n*

**S10n Array**  
*Intended for use with an array of 7 to 11 S10n*

**S10n Large**  
*Intended for use with an array of 12 or more S10n*

## Control

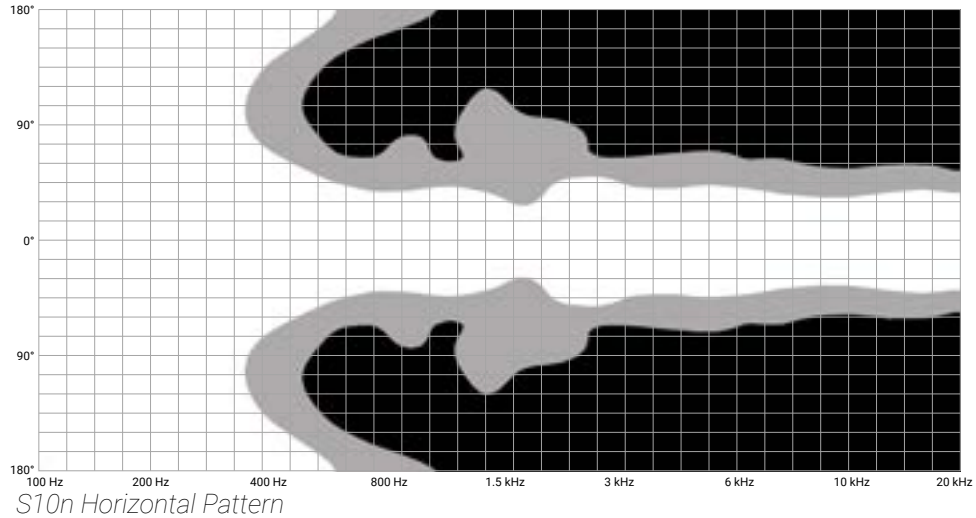
**Array Shaping overlays** (found in the *Array Shaping folders of the [Adamson Load Library](#)*) can be recalled in the EQ section of Lake Controller to adjust the contour of the array. Recalling the appropriate EQ overlay or preset for the number of cabinets being used provides the standard Adamson frequency response of your array, compensating for different low-frequency coupling.

**Tilt overlays** (found in the *Array Shaping folders of the [Adamson Load Library](#)*) can be used to alter the overall acoustic response of an array. Tilt overlays apply a filter, centered at 1kHz, which reaches the noted decibel cut or boost at the extreme ends of the listening spectrum. For example, a +1 Tilt will apply +1 decibel at 20kHz and -1 decibel at 20Hz. Alternately, a -2 Tilt will apply -2 decibels at 20kHz and +2 decibels at 20Hz.

Please refer to the [Adamson PLM & Lake Handbook](#) for detailed instructions on recalling Tilt and Array Shaping overlays.

# S10n

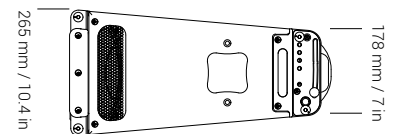
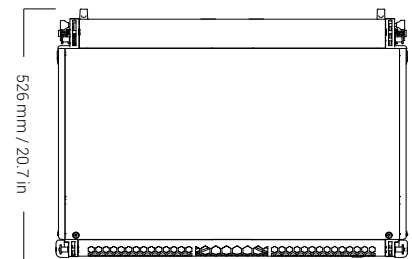
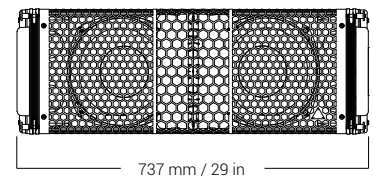
## Dispersion



## Technical Specifications

Frequency Range (+/- 3dB)	60 Hz - 18 kHz
Nominal Directivity (-6 dB) H x V	80° x 10°
Maximum Peak SPL **	141.3
Components LF	2x ND10-LM 10" Kevlar Neodymium Driver
Components HF	Adamson NH4TA2 4" Diaphragm / 1.5" Exit Compression Driver
Nominal Impedance LF	2 x 16 Ω (8 Ω)
Nominal Impedance HF	8 Ω
Power Handling (AES / Peak) LF	2x 350 / 2x 1400 W
Power Handling (AES / Peak) HF	160 / 640 W
Rigging	SlideLock Rigging System
Connection	2x Speakon™ NL8
Height Front (mm / in)	265 / 10.4
Height Back (mm / in)	178 / 7
Width (mm / in)	737 / 29
Depth (mm / in)	526 / 20.7
Weight (kg / lbs)	27 / 60
Processing	Lake

\*\*12 dB crest factor pink noise at 1m, free field, using specified processing and amplification





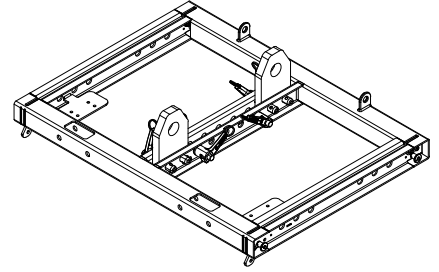
# S10n

## Accessories

There are a number of accessories available for the Adamson S10n line array cabinets. The list below is only a few of the accessories available.

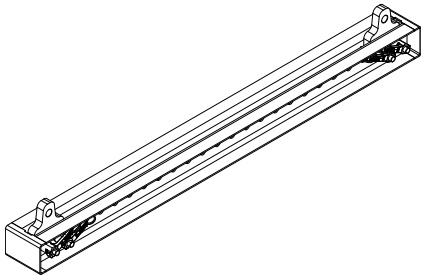
### Sub-Compact Support Frame (930-0025)

*Support frame for S7, CS7, S118, and CS118 enclosures*



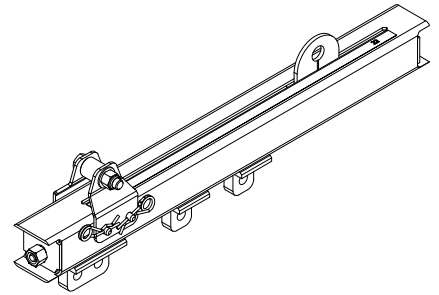
### Extended Beam (930-0021)

*Accommodates greater array articulation*



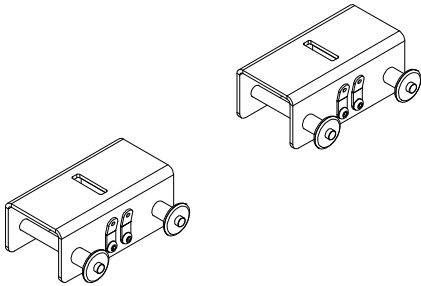
### Moving Point Extended Beam (930-0033)

*Extension beam with continuously adjustable pick point*



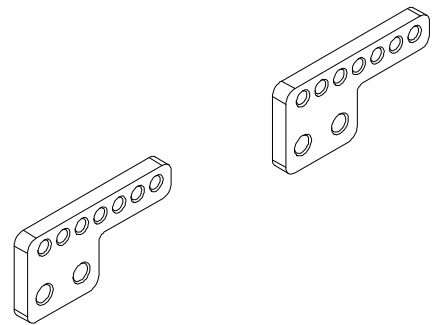
### Sub-Compact Underhang Adapter Kit (931-0010)

*Suspends S10/S10n/CS10/CS10n enclosures with the use of the Sub-Compact Support Frame (part no. 930-0020) from E-Series 3-way line source enclosures*



### Extended Lifting Plates (930-0033)

*Lifting plates with fine resolution pick points for single point hangs*



### Line Array H-Clamp (932-0047)

*Horizontal articulator clamp to be used with S-Series/CS-Series/IS-Series line array rigging frames*

