Arclite & Arclite 15B

User Guide

Contents

1.0 Safety and Regulations

1.1 Important safety instructions

The lightning flash with an 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

For EC Declaration of Conformity please go to:

voidacoustics.com/eu-declaration-loudspeakers

1.4 UKCA marking

For details of the UKCA marking go to:

voidacoustics.com/uk-declaration-loudspeakers

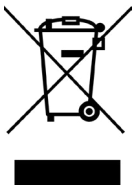
1.5 Warranty statement

For warranty statement go to:

voidacoustics.com/terms-conditions/

1.6 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.

2.0 Unpacking and Checking

All Void Acoustics products are carefully manufactured and thoroughly tested before being despatched. 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 Arclite loudspeaker from its original packaging:

- Arclite loudspeakers come packaged in a lid and base carton that has a protective sleeve around it; avoid using sharp implements to remove the cardboard to protect the finish.
- If you need to place the loudspeaker on a flat surface make sure it is free from debris.
- When you have removed the Arclite 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 1 for warranty conditions and see section 7 if your product needs servicing.

3.0 About

3.1 Welcome

Many thanks for purchasing this Void Acoustics Arcline 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 ground-breaking 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.

3.2 Arclite Overview

Designed for pairing with Arcline 218 and 118 subwoofers, Arclite operates as a two-way active, three-way arrayable point source loudspeaker. Offering scalability with maximum output and coherence, to deliver a true point source alternative to the Arcline 8.

Tailored for audio integrators and sound engineers with a focus on touring, Arclite guarantees predictable behaviour even in the most demanding applications. An arrays dispersion and sound pressure levels can be configured precisely to best serve any demands. Arclite's design also offers summation up to 20 kHz with minimal destructive interference.

Dual 4-pin locking connectors with link out and minimal rigging requirements for ground stacked deployments allows for very fast set-up times.

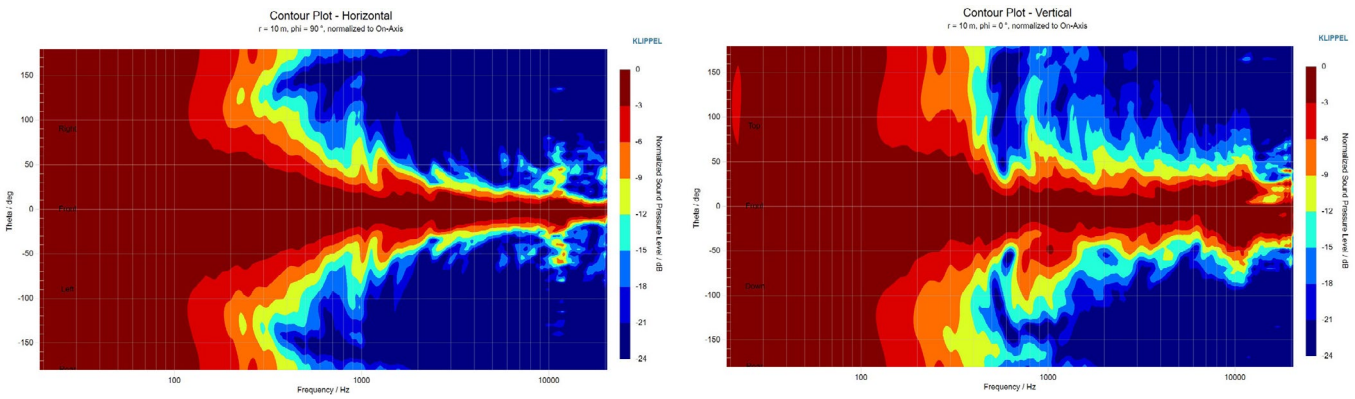
3.3 Arclite Key Features

- Three-way, bi-amped arrayable point source
- Ground stack or flying configurations available
- FEA optimised asymmetrical combination of waveguide and horn
- Dual 4-pin locking connector with link-through for quick and easy set up
- Optional rigging and fly bar
- FIR optimised preset with Void amplifiers
- State of the art, coaxial ring radiator
- High-sensitivity, lightweight neodymium transducer
- Available as standard in black with a red horn and black fins. Custom RAL and KROME finishes for the horn and fins are available upon request

3.4 Arclite Specifications

Frequency response	45 Hz - 18 kHz ±3 dB
Efficiency[1]	MHF: 113 dB 1 W / 1 m LF: 98 dB 1 W / 1 m
Nominal impedance	LF: 8 Ω, MHF: 16 Ω
Power handling[2]	LF: 8 Ω, MHF: 16 Ω
Maximum output[3]	LF: 1000 W, MHF 190 W
Driver configuration	1 x 15” LF, 1 x 4” MF, 1 x 2.5” HF
Dispersion	35° H x 60° V (25° up - 35° down)
Connectors	2 x 4-pin locking connector
Height	793 mm (31.3”)
Width	510 mm (20.1”)
Depth	559 mm (22”)
Weight	44 kg (97 lbs)
Enclosure	15 mm multi-laminate plywood
Rigging	Ground stack or suspended
Grille	Perforated steel with foam filter
Finish	Textured ‘TourCoat’ polyurea

1 -10 dB IEC 60268-5 2 Calculated 3 Measured in half space



3.5 Arclite dimensions

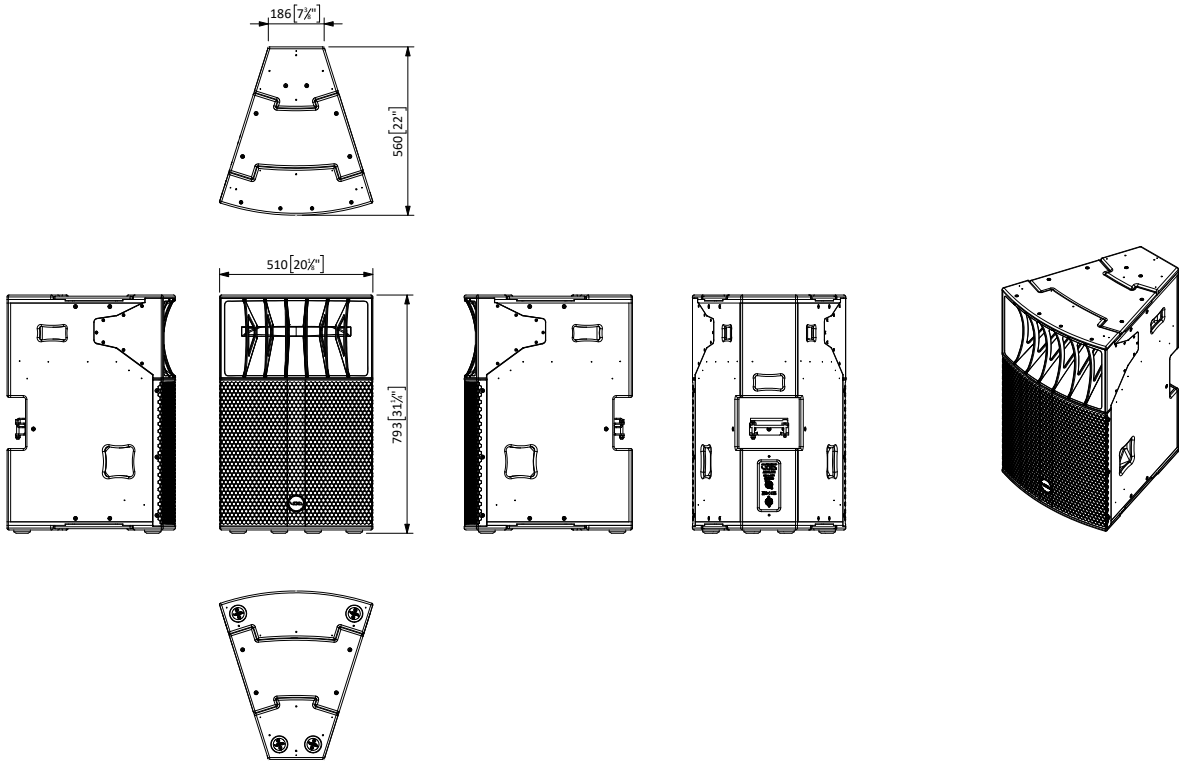


Figure 3.2: Arclite dimensions without rigging

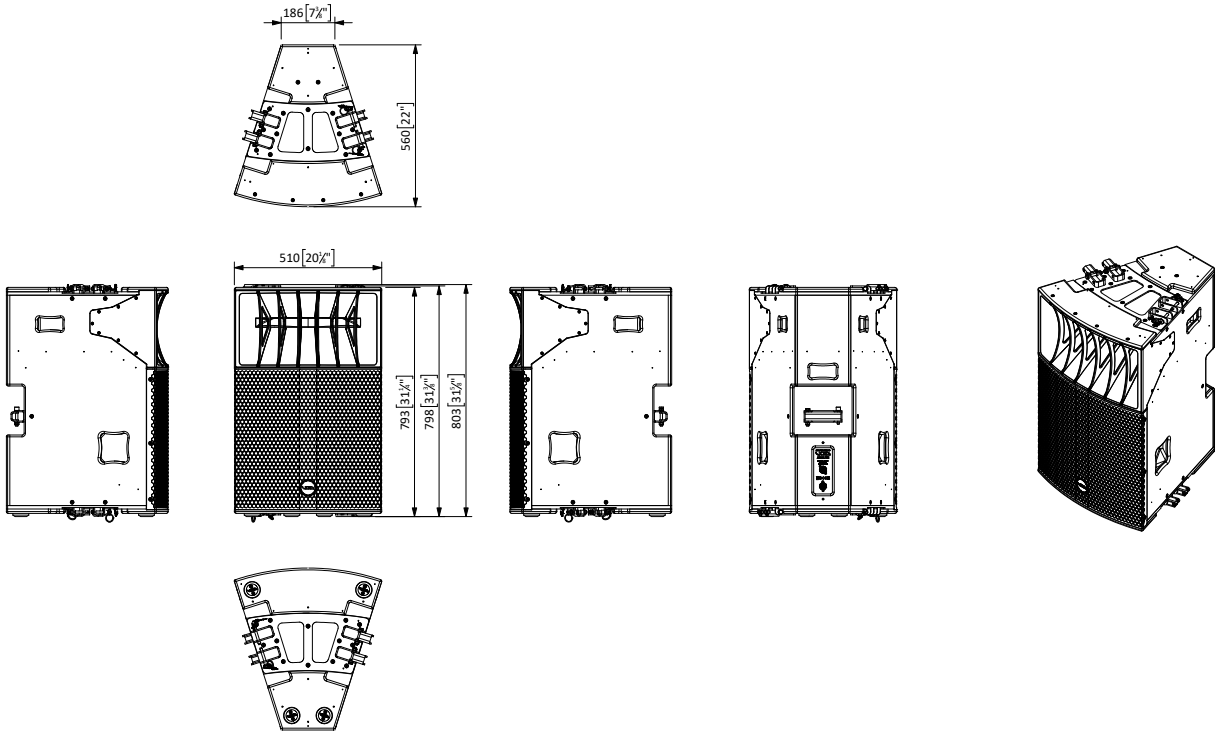


Figure 3.3: Arclite dimensions with rigging

3.6 Arclite 15B Key Features

- 15 inch reflex system with optional rigging compatible with Arclite loudspeakers
- Mutually coupling 15 inch enclosure extends Arclite system output
- High power handling of 1000 W at 8 Ohms
- 4 inch voice coil with dual forced air ventilation for reduced power compression
- 4-pin locking connector input with link-through capability
- Rear mounted snap-back spring shackle for secure rigging
- M20 top hat fixture for flexible mounting of satellites
- Can be used as a standalone dedicated mid-bass enclosure
- Available as standard in black with a black grille

3.7 Arclite 15B Specifications

Frequency response	45 Hz - 569 Hz ±3 dB
Efficiency[1]	98 dB 1W / 1M
Crossover Points	80 Hz - 569 Hz active
Nominal impedance	8 Ω
Power handling[2]	1000 W AES
Maximum output[3]	133 dB cont. 139 dB peak
Driver configuration	1 x 15” LF
Connectors	2 x 4-pin locking connector
Height	512 mm (20.2”)
Width	510 mm (20.1”)
Depth	559 mm (22”)
Weight	29 kg (64 lbs)
Enclosure	15 mm birch plywood
Mounting	M20 top hat Optional Arclite Rigging
Grille	Perforated steel with foam filter
Finish	Textured ‘TourCoat’ polyurea

1 -10 dB IEC 60268-5 2 Calculated 3 Measured in half space

3.8 Arclite 15B dimensions

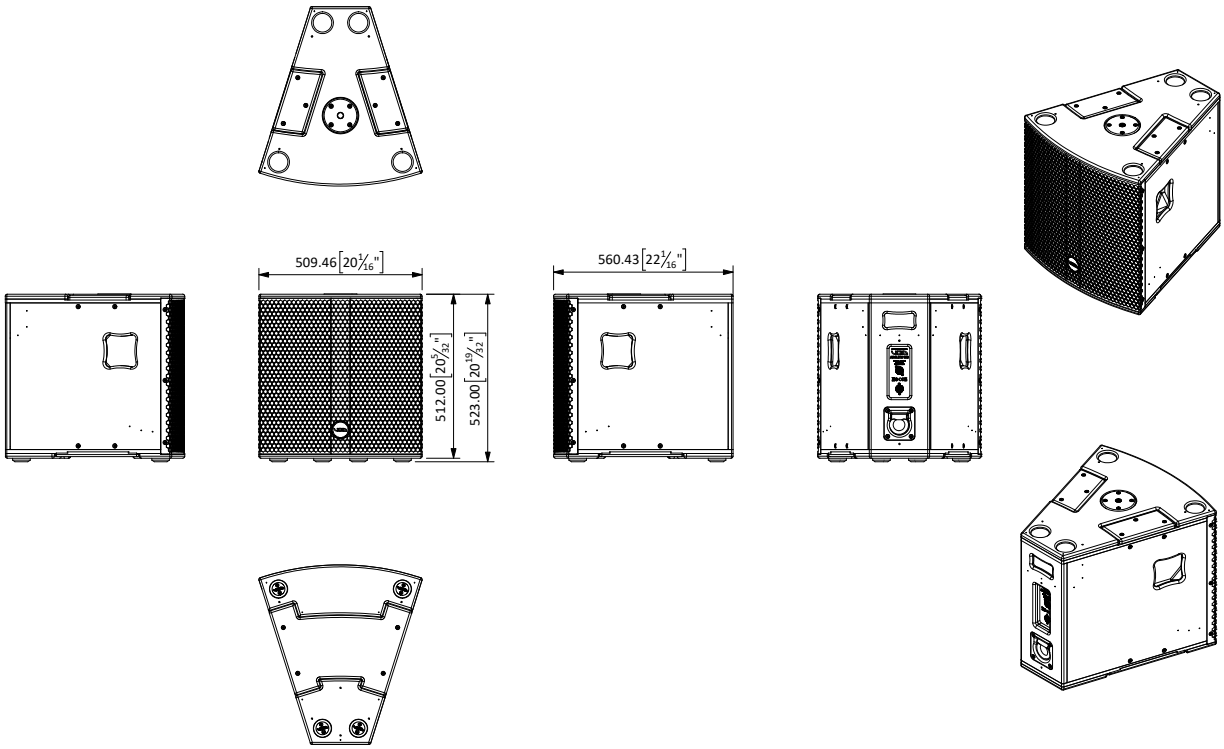


Figure 3.4: Arclite 15B dimensions without rigging

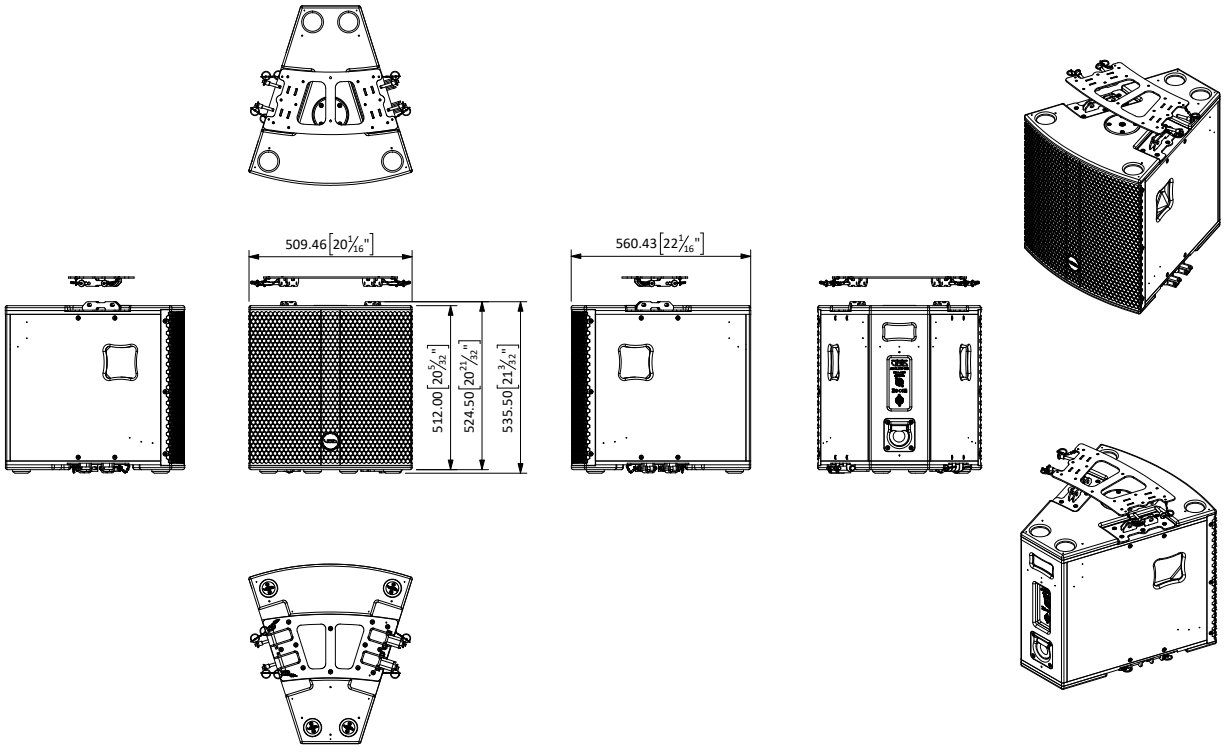


Figure 3.5: Arclite 15B dimensions with rigging

4.0 Cabling and Wiring

4.1 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.

4.2 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 mm²	Imperial AWG	8 Ω load	4 Ω load	2 Ω load
2.50 mm²	13 AWG	36 m	18m	9m
4.00 mm²	11 AWG	60 m	30m	15m

4.3 Arclite Wiring Diagram

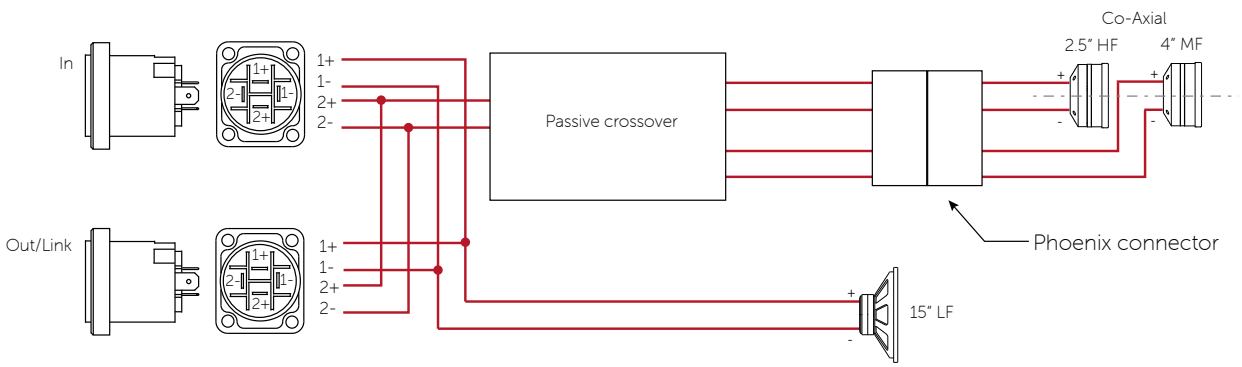


Figure 4.1: Arclite wiring diagram

4.4 Arclite 15B Wiring Diagram

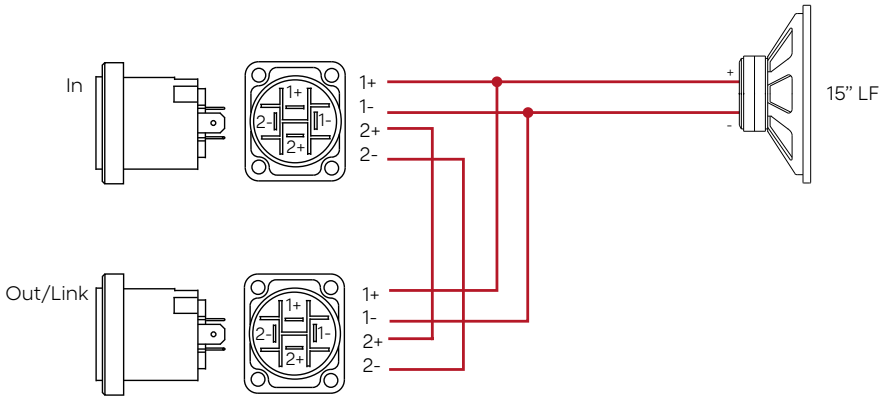


Figure 4.2: Arclite 15B wiring diagram

4.5 Bias D1+/Q1+/Q1.5+/Q2+ phoenix wiring

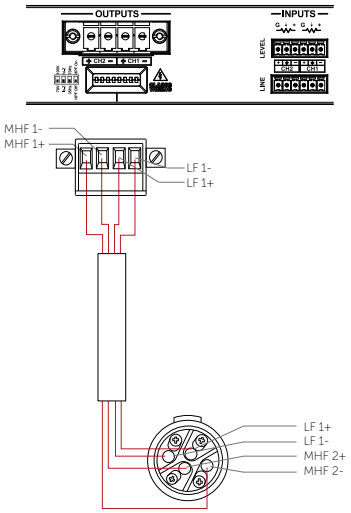


Figure 4.3: Bias D1+

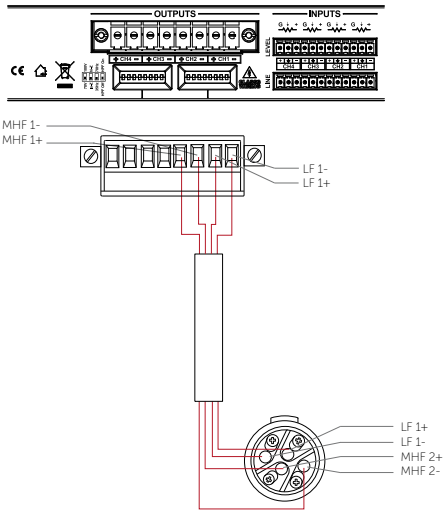


Figure 4.4: Bias Q1+/Q1.5+/Q2+

4.6 Bias Q3/Q5 4-pin locking connector wiring

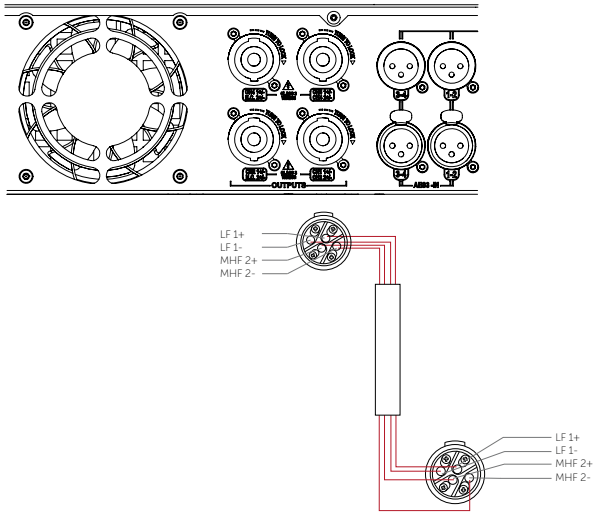


Figure 4.5: Bias Q3

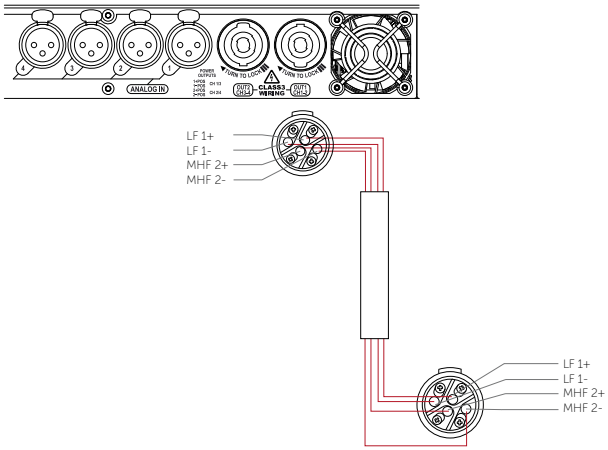


Figure 4.6: Bias Q5

4.7 Max Parallel Units

	Output 1	Output 2
Output	LF (15”)	MHF (4”+2.5”)
Max Parallel Units	4 (2 Ω load to amplifier)*	8 (2 Ω load to amplifier)*

* Please make sure to select an amplifier with adequate power for your intended parallel configuration

* Half quoted max parallel units if bridging amp channels and consult your amplifier user guide for bridged wiring instructions

5.0 Application and Control

5.1 Arclite Presets

The Arclite can be used as a single standalone unit or paired with multiple boxes to provide additional horizontal dispersion.

Model	Application	Details
Arclite	Single Box - 100Hz HPF FIR	Using Arclite as a single box
	Single Box - 80Hz HPF FIR	
	Single Box - Full Range FIR	
	Multiple Boxes - 100Hz HPF FIR	Pairing 2 or more Arclites
	Multiple Boxes - 80Hz HPF FIR	
	Multiple Boxes - Full Range FIR	

5.2 Arclite 15B Presets

The Arclite 15B can be used as an Arclite Extension or as a Standalone Mid-Bass enclosure. To enable this, there are multiple different presets available. The following table breaks down those presets.

Model	Application	Details
Arclite	With 15B - 80Hz HPF FIR	Arclite Preset that has the 15B in parallel
	With 15B - 100Hz HPF FIR	
	With 15B - Full Range FIR	
Arclite 15B	Arclite Extension - 80Hz HPF FIR	For powering 15B directly, in use as an additional 15 for the Arclite
	Arclite Extension - 100Hz HPF FIR	
	Arclite Extension - Full Range FIR	
	Mid Bass - 80 Hz LPF	For powering 15B as a Stand alone mid-bass enclosure. This can be used with products such as the Air 8
	Mid Bass - 100 Hz LPF	
	Mid Bass - 120 Hz LPF	

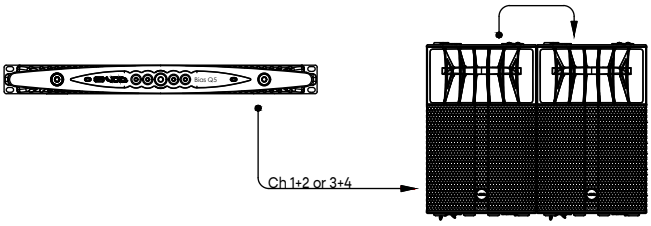
5.3 Typical Wiring Configurations

Two Arclite in Parallel

This configuration presents a 4 ohm load to the LF amplifier and a 8 ohm load to the MHF amplifier.

For optimal performance, use the “Multiple Boxes” preset, ensuring the high-pass filter is selected appropriately for the intended application.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



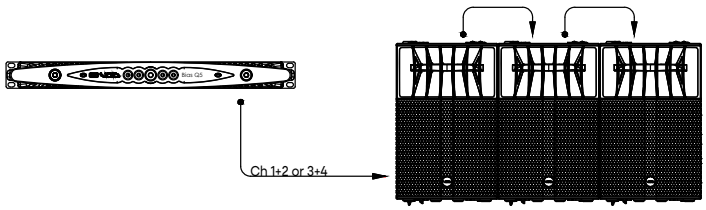
2 Arclite in Parallel
Preset: Multiple Boxes

Three Arclite in Parallel

This configuration presents a 2.67 ohm load to the LF amplifier and a 5.33 ohm load to the MHF amplifier.

For optimal performance, use the “Multiple Boxes” preset, ensuring the high-pass filter is selected appropriately for the intended application.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



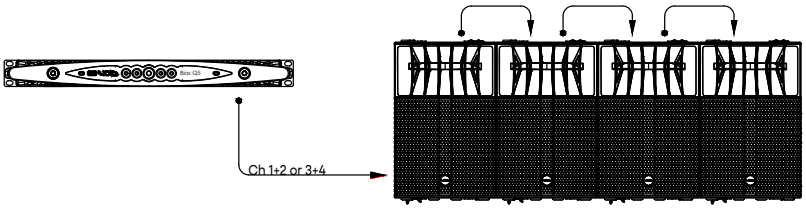
3 Arclite in Parallel
Preset: Multiple Boxes

Four Arclite in Parallel

This configuration presents a 2 ohm load to the LF amplifier and a 4 ohm load to the MHF amplifier.

For optimal performance, use the “Multiple Boxes” preset, ensuring the high-pass filter is selected appropriately for the intended application.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



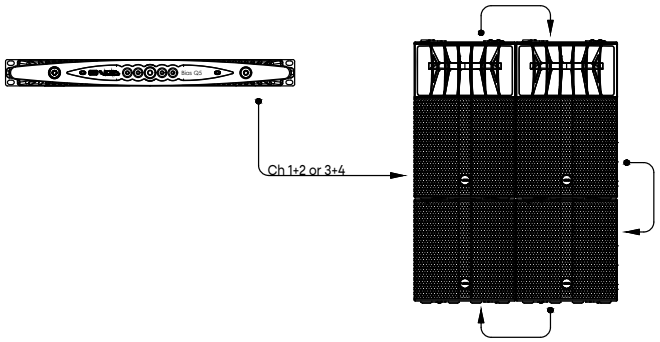
4 Arclite in Parallel
Preset: Multiple Boxes

Two Arclite and Two Arclite 15B in Parallel

This configuration presents a 2 ohm load to the LF amplifier and a 8-ohm load to the MHF amplifier.

For optimal performance, use the “Arclite with 15B” preset, ensuring the high-pass filter is selected appropriately for the intended application.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



2 Arclite and 2 Arclite 15B in Parallel
Preset: Arclite with 15B

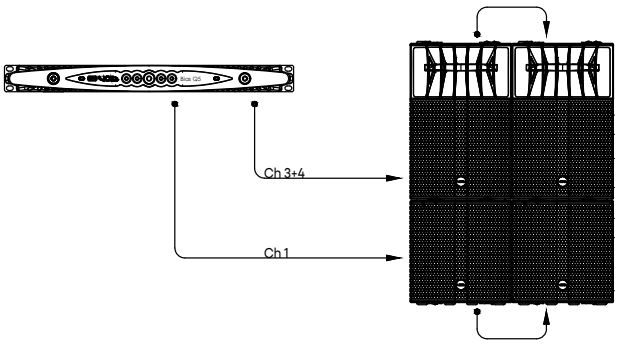
Two Arclite and Two Arclite 15B Extension

In this configuration, the Arclite LF amplifier is loaded at 4 ohms, the MHF amplifier at 8 ohms, and the Arclite 15B amplifier at 4 ohms.

Apply the Arclite “Multiple Boxes” preset, selecting the high-pass filter appropriate to the application.

For the Arclite 15B, use the “Arclite Extension” preset with the same high-pass filter settings used for the Arclite.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



2 Arclite in Parallel
2 Arclite 15B in Parallel
Preset: Arclite Multiple Boxes
Preset: Arclite 15B Extension

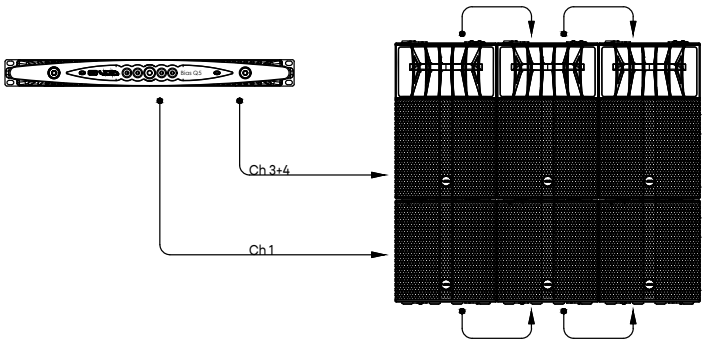
Three Arclite in Parallel and Three Arclite 15B Extension

In this configuration, the Arclite LF amplifier is loaded at 2.67 ohms, the MHF amplifier at 5.33 ohms, and the Arclite 15B amplifier at 2.67 ohms.

Apply the Arclite “Multiple Boxes” preset, selecting the high-pass filter appropriate to the application.

For the Arclite 15B, use the “Arclite Extension” preset with the same high-pass filter settings used for the Arclite.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



3 Arclite in Parallel
3 Arclite 15B in Parallel
Preset: Arclite Multiple Boxes
Preset: Arclite 15B Extension

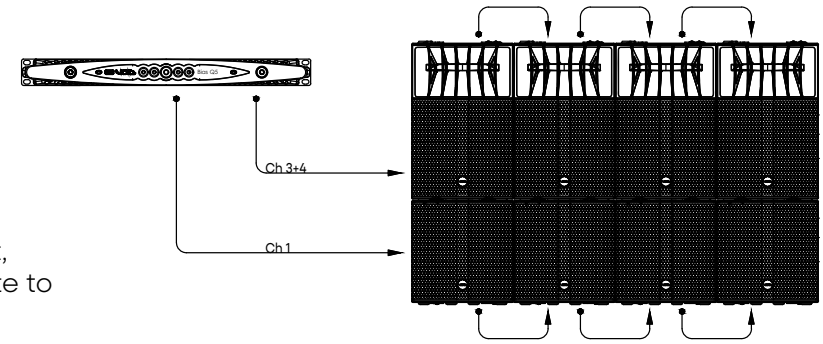
Four Arclite in Parallel and Four Arclite 15B Extension

In this configuration, the Arclite LF amplifier is loaded at 2 ohms, the MHF amplifier at 4 ohms, and the Arclite 15B amplifier at 2 ohms.

Apply the Arclite “Multiple Boxes” preset, selecting the high-pass filter appropriate to the application.

For the Arclite 15B, use the “Arclite Extension” preset with the same high-pass filter settings used for the Arclite.

* Ensure the correct number of parallel connected loudspeakers is configured in ArmoníaPlus.



4 Arclite in Parallel
4 Arclite 15B in Parallel
Preset: Arclite Multiple Boxes
Preset: Arclite 15B Extension

6.0 Mounting

6.1 Installation Safety

To avoid mechanical hazards, please note the following:

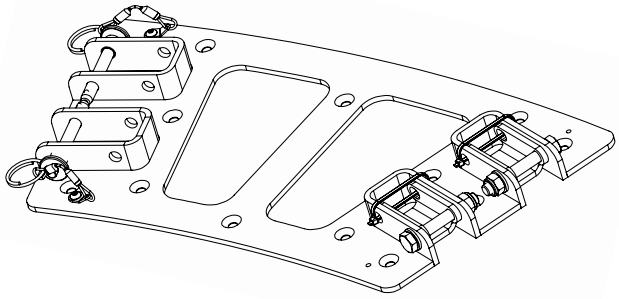
- Safety regulations vary in different regions. Full compliance with those regulations must be your priority.
- Installations must only be undertaken by fully qualified and experienced engineers/technicians who understand local regulations.
- This may include consulting a structural engineer before installation 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) whilst installing. Always concentrate fully on the installation operation.
- Do not install equipment that is worn, damaged, corroded, mishandled or over-stressed in any way.
- Use only Void-approved mounting equipment and accessories.
- Secondary safeties should be provided in all instances where cabinets are flying or fixing overhead and should conform to local regulations.

6.2 Rigging and Flying Descriptions - Arclite

The Arclite Rigging system consists of two elements and a third for Arclite 15B configurations.

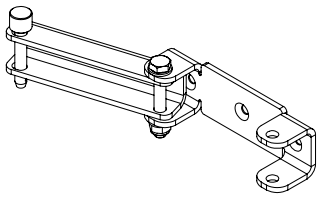
Rigging Mouting Plate

This component is used to attach additional Arclite's together horizontally.



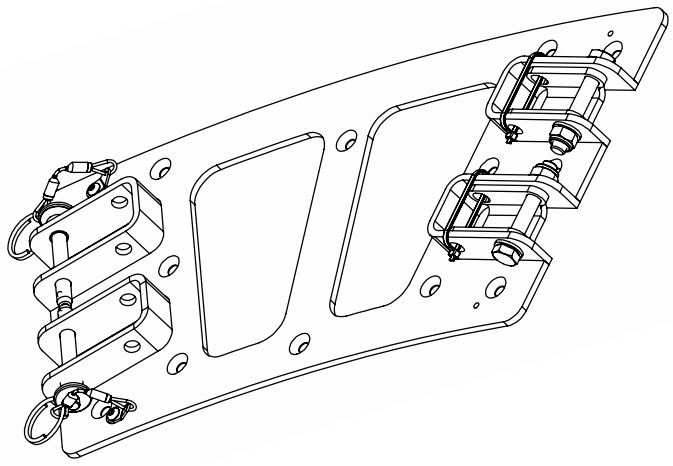
Rear Connector Plate

This component is used to add stability to the rear side of the Arclite and is swung and pinned securing the rear side horizontally.



Outer Rigging Plate

This component is used when attaching the Arclite 15B to the Arclite, it is secured on the underside in replacement of the Rigging Connector.

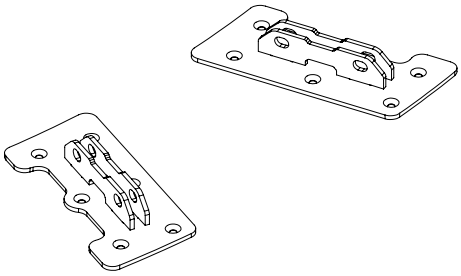


6.3 Rigging and Flying Descriptions - Arclite 15B

The Arclite 15B Rigging system consists of two elements.

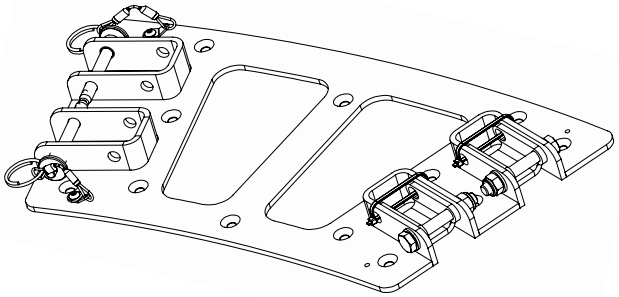
Inner Right and Left Rigging Plates

This component is used to attach the Arclite and Arclite 15B together vertically.



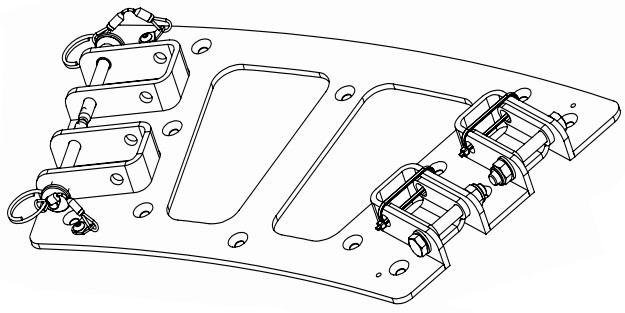
Rigging Mounting Plate

This component is the same as the one used on the Arclite Configurations. It's used on the underside to secure the configurations horizontally.



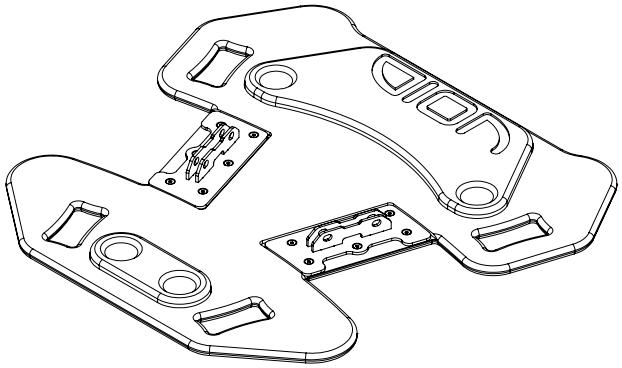
Outer Rigging Plate

This component is used on the underside of the Arclite 15B when attaching the Mounting Board.



Arclite 15B Mounting Board

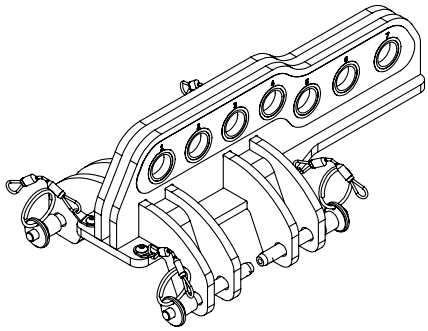
The Mounting Board is used to provide stability to the 15B when it's used in conjunction with a pole mounted speaker. The Inner Right and Left Rigging plates are used to secure it to the Arclite 15B.



6.4 Flying the Arclite and Arclite 15B

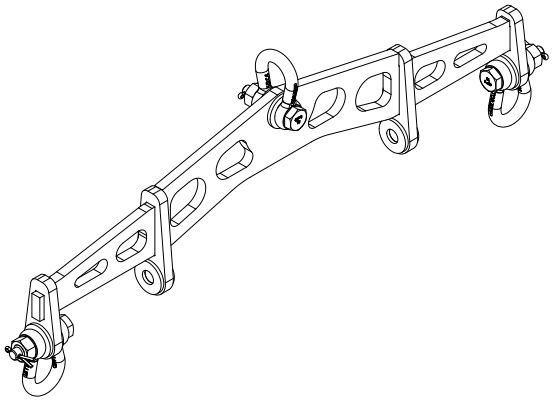
Vertical Flybar - IT4310

This is used to fly the Arclite and Arclite 15B Configurations and has seven angulation holes available.



Arclite Lift beam - IT6342

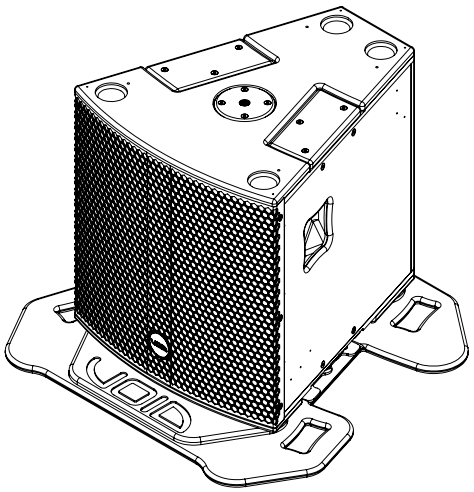
This component is used when lifting a Three and Four Array Arclite and Arclite 15B Configuration.



6.5 Arclite 15B Mounting Board - IT6224

The Arclite 15B has a heavy-duty top hat used to attach a pole and bracket to support an additional speaker above it (not suitable for speakers above 20kg). To provide the necessary stability a Mounting Board is attached.

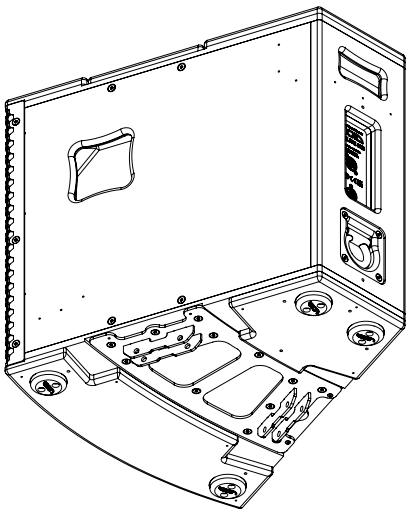
Infill Plates if not already assembled can be attached via twelve M6 socket heads.



Step 1

Attach the Outer Rigging Plate to the underside of the Arclite 15B.

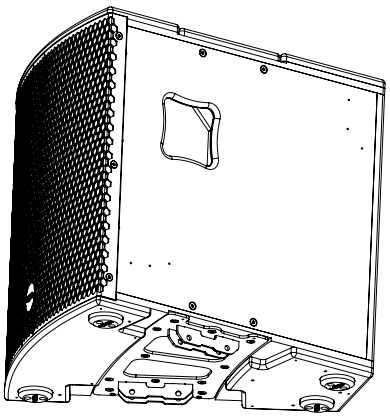
If the Rigging Mounting Plate is attached first unfasten the M6 socket heads on the Rigging Mounting Plate using a 5mm Allen or Hex Bit.

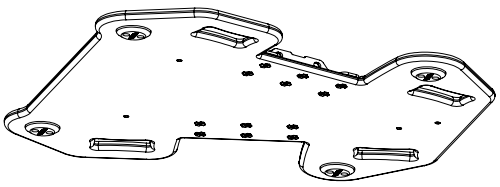


Step 2

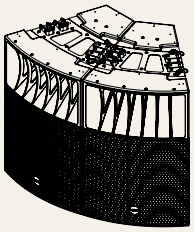
Align components together and slide the plates within each other.

Secure using quick release pins.





7.0 Rigging Procedure for flown Arclite arrays



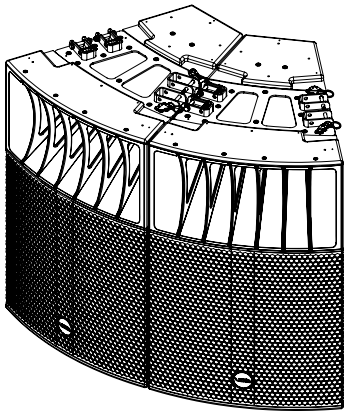
7.1 Two Configuration Arclite Array

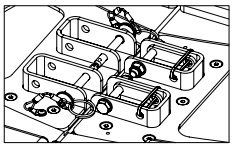
An Arclite configuration consisting of two coupled speakers is the minimum number of speakers that can be flown.

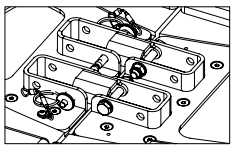
Step 1

Zip ties are cut and quick release pins are released.

Rigging Mounting plate connectors are swung around and then resecured.

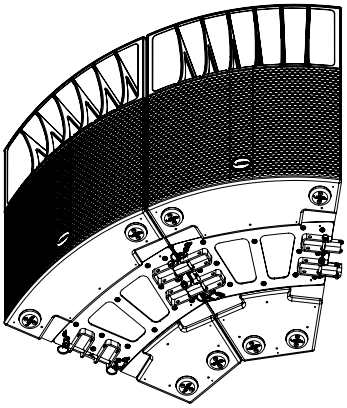


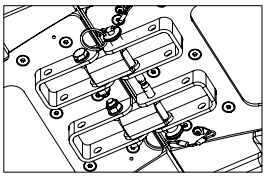




Step 2

Rigging is completed on underside following the same process. Rigging Mounting Plates not in use can be left zip tied.

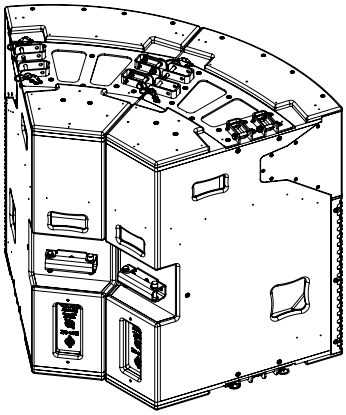


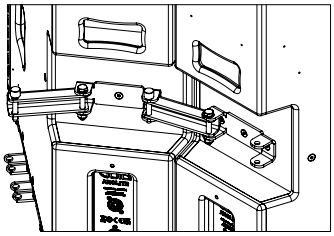


Step 3

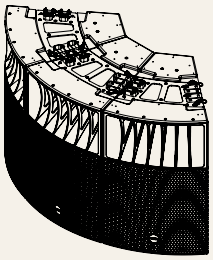
Rear connectors plates on the rear of the Arclite's are released, swung across and secured using 8mm pin and split pin.

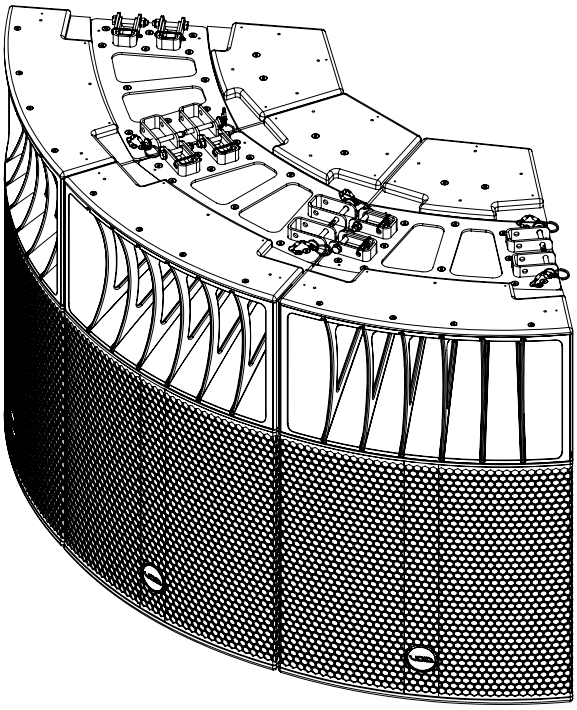
Rear connector plates not in use can be left to move freely or be removed.

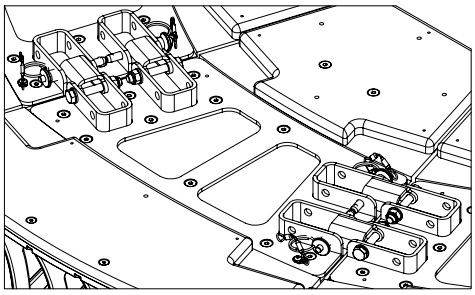


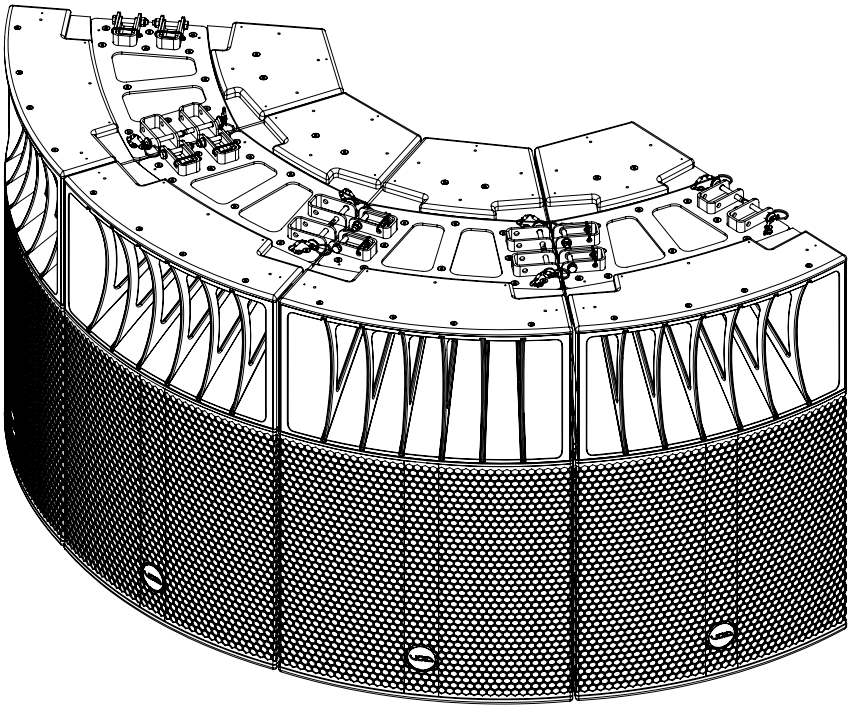


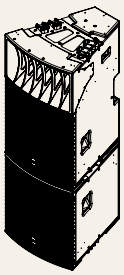
7.2 Three or Four Configuration Arclite Array









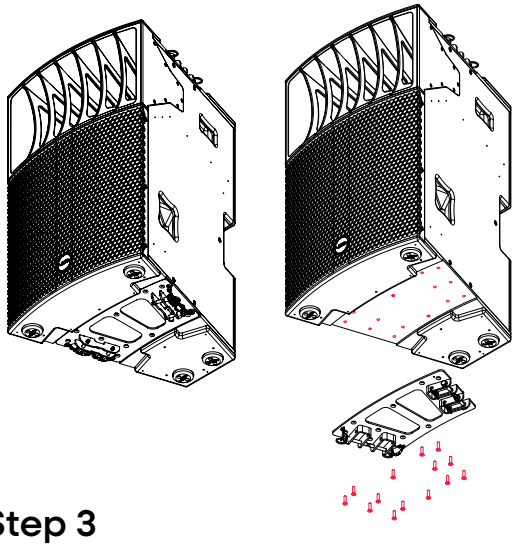


7.3 Rigging procedure for flown Arclite and Arclite 15B

An Arclite and Arclite 15B Configuration are assembled as individual vertical line arrays before two, three or four horizontal arrays can be rigged.

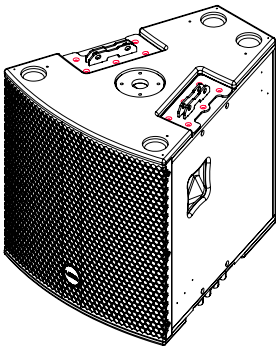
Step 1

The Plate on the underside of Arclite should be the Outer Rigging Plate allowing the Arclite 15B to be attached. If assembling or disassembling of rigging is necessary this is done by unfastening the 14 M6 socket heads with a 5mm Allen or Hex Bit.



Step 2

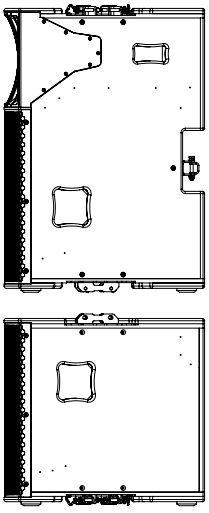
Arclite 15B should have the Inner Right and Left Rigging Plates attached on topside. If assembling or disassembling of rigging is necessary this is done by unfastening the M6 socket heads with a 5mm Allen key.



Step 3

Arclite and Arclite 15B to be aligned, ensuring feet are all facing down.

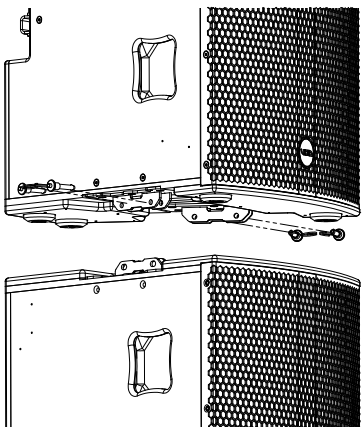
Quick Release Pins on Arclite rigging released.

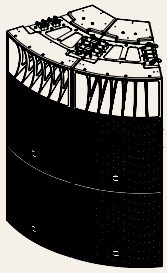


Step 4

When aligned bring speakers together and slide the plates within each other.

Secure using quick release pins.





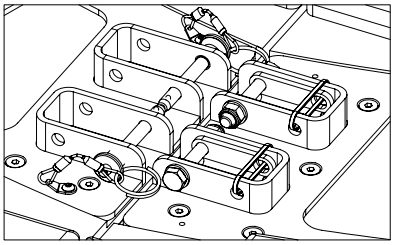
7.4 Multiple Flown Arclite and Arclite 15B Arrays

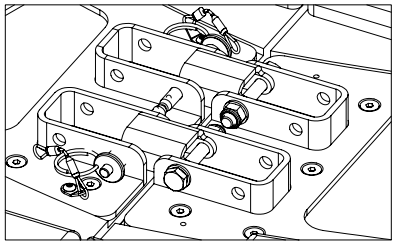
An Arclite and Arclite 15B configuration consisting of two Arclite and Arclite 15B line arrays is the minimum number of speakers that can be flown. The operation to attach the lines is identical to the Arclite rigging operation.

Step 1

Zip ties are cut and quick release pins are released.

Mounting Rigging Plate connectors are swung around and then resecured using the quick release pins.

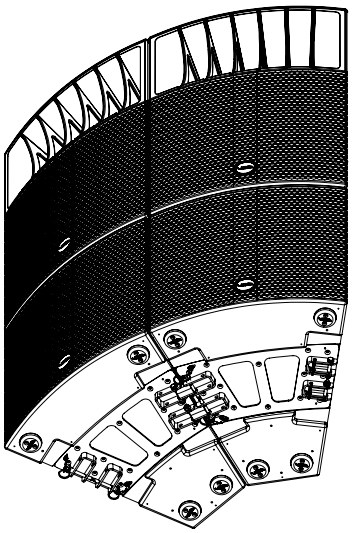




Step 2

Rigging is completed on underside following the same process. The Mounting Rigging Plate is attached to the bottom of the Arclite 15Bs.

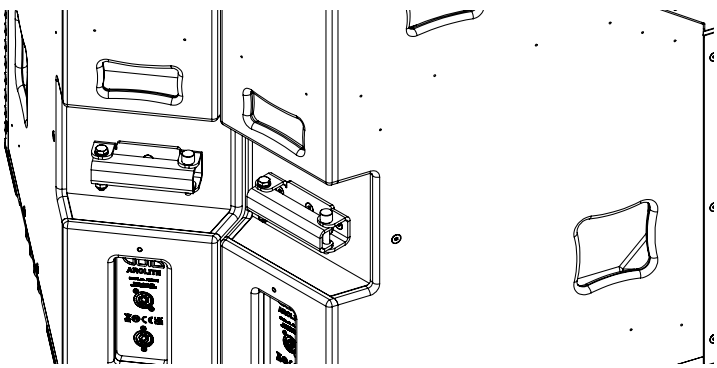
Connectors not in use can be left zip tied.

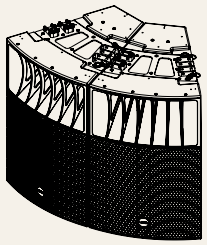


Step 3

Rear connectors plates on the rear of the Arclite's are released, swung across and secured using 8mm pin and split pin.

Rear connector plates not in use can be left to move freely or removed.





8.0 Flying Procedure

The following procedures are authorised lifts.
Non authorised lifts should never be conducted.

8.1 Flying a two configuration Arclite Array

Rigging Accessories

IT4269	Arclite Speaker x2
IT4165	Rigging Mounting Plate x4
N/A	Rear Connector Plate x2
IT4310	Flybar x1
N/A	GreenPin Shackle WLL 2T x1
N/A	1 Leg Master Link Sling (not supplied) x1

Risks

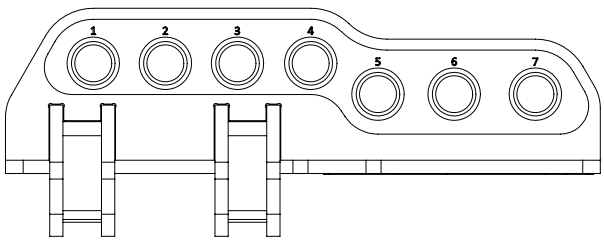
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

Array Orientation: The Arclite should not be stacked vertically and can be stacked horizontally up to 2 times in this configuration.

Angle Matrix

Each shackle position determines the angle the speaker will be positioned at.



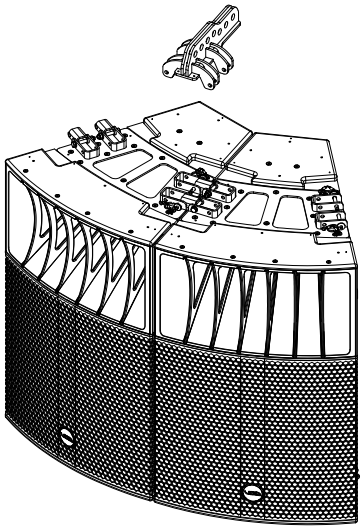
Void Arclite Flybar Shackle hole positions for a Two Array.

Shackle Position	Speaker Angle
1	+10°
2	5°
3	0°
4	-5°
5	-7.5°
6	-15°
7	-17.5°

Step 1

Ensure Rigging is pinned together as per the Arclite Rigging Guidance.

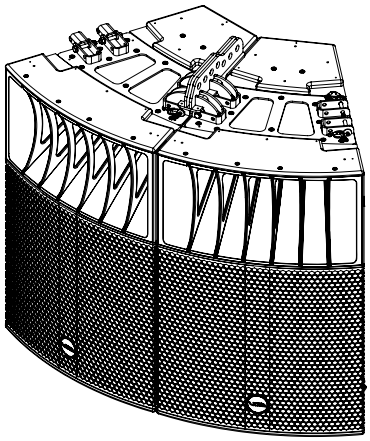
Align Flybar in center between the two rigging plates.

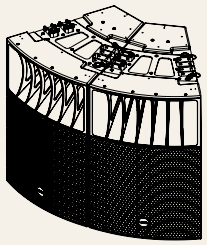


Step 2

Slot Flybar between slots on Rigging Mounting Plate.

Ensure all slots are aligned with the holes.



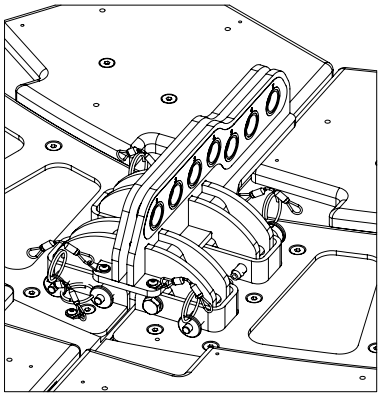


Step 3

Secure using 4 quick release pins that are landyarded to the flybar.

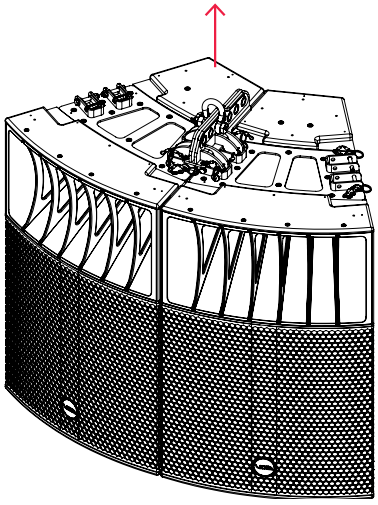
Attach shackle in required position, ensure nut and split pin are secured.

Manually check all quick release pins are all active and linking points are secured.



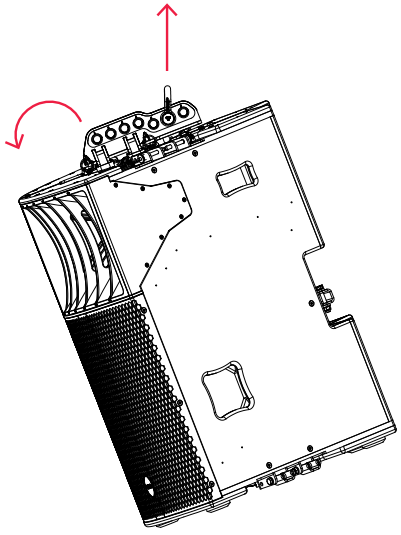
Step 4

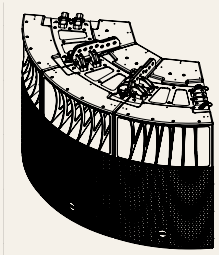
Lift the system with the shackle on the predetermined hole position using a 1 leg sling.



Example

Two array configuration using hole position 7 angles speaker 17.5 degrees down.





8.2 Flying a three configuration Arclite Array

Rigging Accessories

IT4269	Arclite Speaker x3
IT4165	Rigging Mounting Plate x6
N/A	Rear Connector Plate x3
IT4310	Flybar x2
N/A	GreenPin Shackle WLL 2T x2
N/A	2 Leg Master Link Sling (not supplied) x1
N/A	1 Leg Master Link Sling (not supplied) x1

Risks

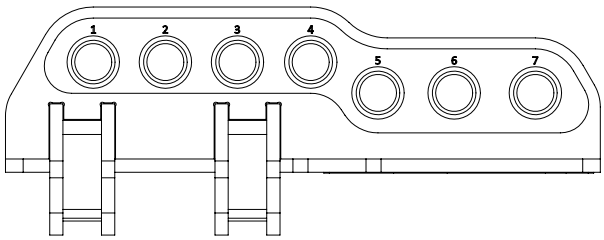
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

Array Orientation: The Arclite should not be stacked vertically and can be stacked horizontally up to 3 times in this configuration.

Angle Matrix

Each shackle position determines the angle the speaker will be positioned at.



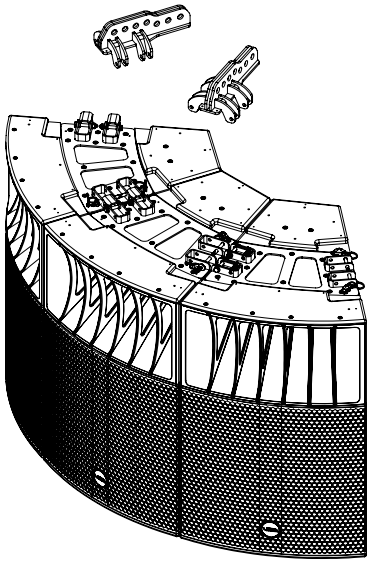
Void Arclite Flybar Shackle hole position for a Three Array

Shackle Position	Speaker Angle
1	+10°
2	5° 6°
3	2° 2.5°
4	-1° 0°
5	-5°
6	-10°
7	-15°

Step 1

Ensure Rigging is pinned together as per the Arclite Rigging Guidance.

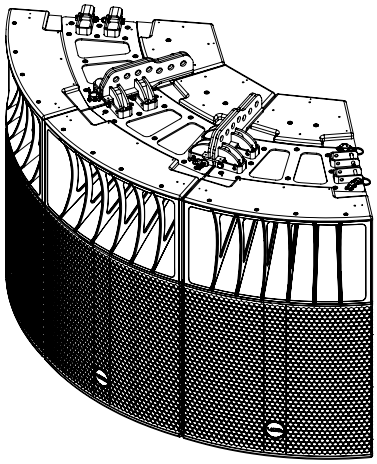
Align Flybar in center between the rigging plates.

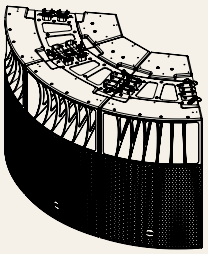


Step 2

Slot two Flybars between slots on Outer Rigging.

Ensure all slots are aligned with the holes.





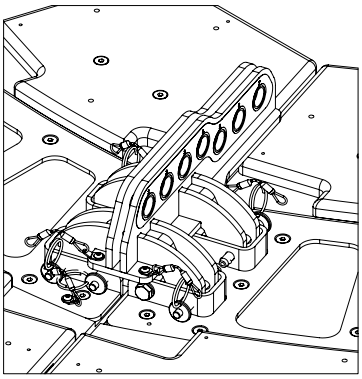
Step 3

Secure using 4 quick release pins that are landyarded to the flybar.

Attach shackle in required position, ensure nut and split pin are secured.

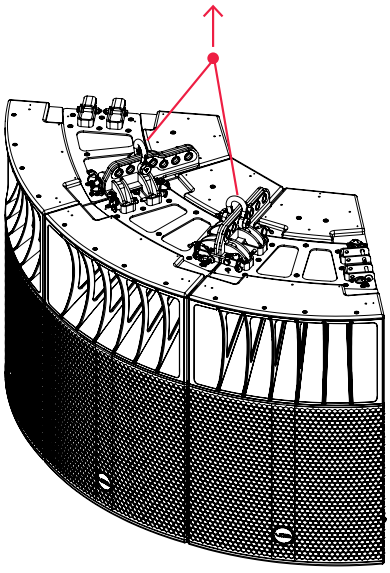
Repeat for the other flybar.

Manually check all quick release pins are all active and linking points are secured.



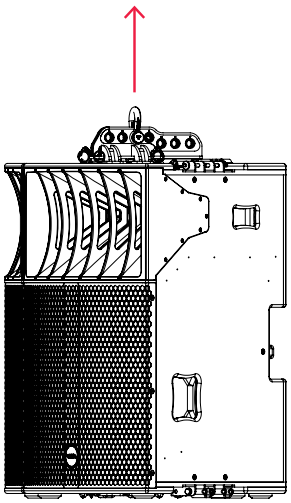
Step 4

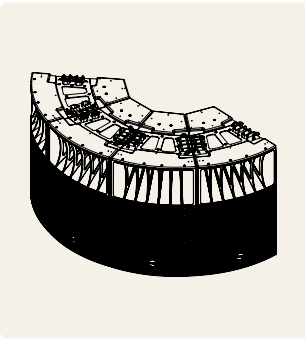
Lift the system with the shackle on the predetermined hole position using a 2-leg master link sling.



Example

Three array configuration using hole position 3 angles speaker 0 degrees.





8.3 Flying a four configuration Arclite Array

Rigging Accessories

IT4269	Arclite Speaker x4
IT4165	Rigging Mounting Plate x8
N/A	Rear Connector Plate x4
IT4310	Flybar x2
N/A	GreenPin Shackle WLL 2T x2
N/A	2 Leg Master Link Sling (not supplied) x1
N/A	1 Leg Master Link Sling (not supplied) x1

Risks

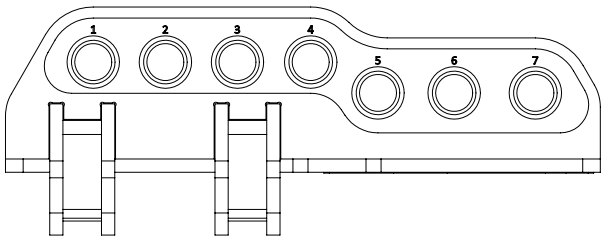
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

Array Orientation: The Arclite should not be stacked vertically and can be stacked horizontally up to 4 times in this configuration.

Angle Matrix

Each shackle position determines the angle the speaker will be positioned at.



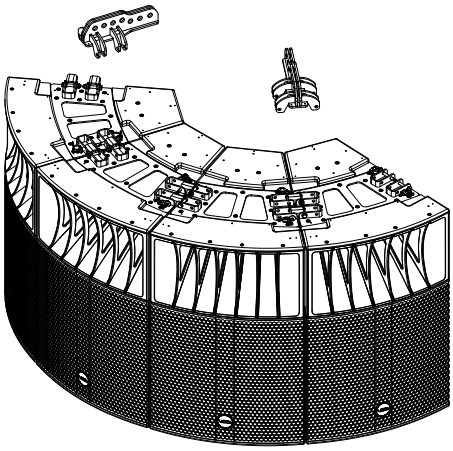
Void Arclite Flybar Shackle hole position for a Four Array

Shackle Position	Speaker Angle
1	+10°
2	5°
3	0°
4	-3°
5	-6°
6	-12°
7	-17° -18°

Step 1

Ensure Rigging is pinned together as per the Arclite Rigging Guidance.

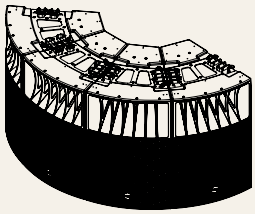
Align Flybar in center between the rigging plates.

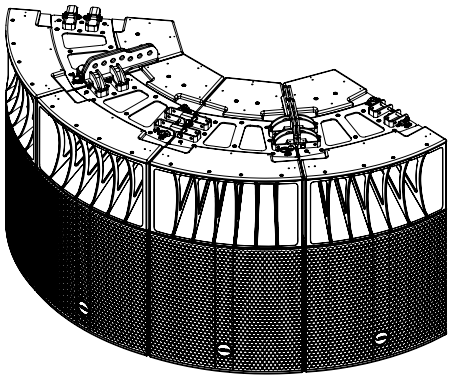


Step 2

Slot two Flybars between slots on Outer Rigging.

Ensure all slots are aligned with the holes.





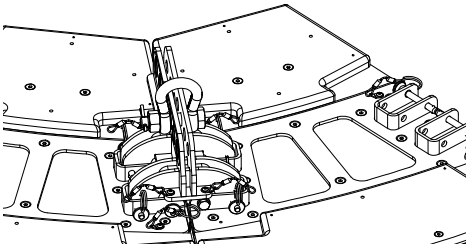
Step 3

Secure using 4 quick release pins that are landyarded to the flybar

Attach shackle in required position, ensure nut and split pin are secured.

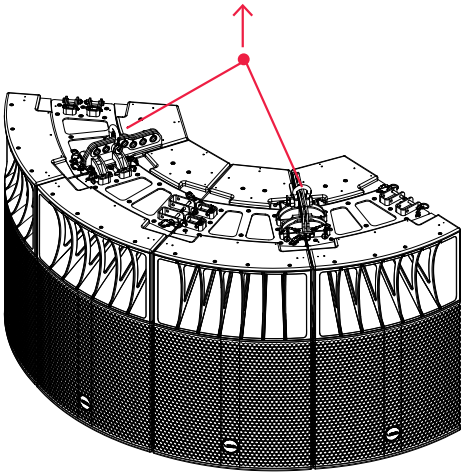
Repeat for the other flybar.

Manually check all quick release pins are all active and linking points are secured.



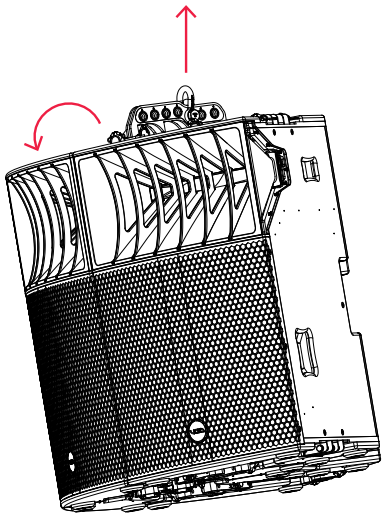
Step 4

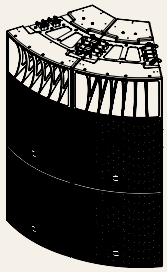
Lift the system with the shackle on the predetermined hole position using a 2-leg master link sling.



Example

Four array configuration using hole position 5 angles speaker 6 degrees down.





8.4 Flying a two configuration Arclite and Arclite 15B Array

Rigging Accessories

IT4269	Arclite Speaker x2
IT6066/IT6067	Arclite 15B Speaker x2
IT4165	Rigging Mounting Plate x4
N/A	Rear Connector Plate x2
IT6061 & IT6062	Inner Right and Left Rigging Plate x2
IT6057	Outer Rigging Plate x2
IT4310	Flybar x1
N/A	GreenPin Shackle WLL 2T x2
N/A	1 Leg Master Link Sling (not supplied) x1
N/A	2 Leg Master Link Sling (not supplied) x1

Risks

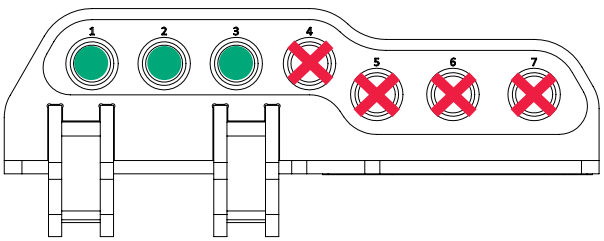
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

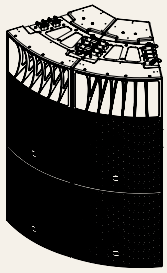
Array Orientation: The Arclite and Arclite 15B should not be stacked vertically and can be stacked horizontally up to 2 times in this configuration

Angle Matrix

For ALL Arclite and Arclite 15B Arrays, shackle positions 1, 2 and 3 are to be used.



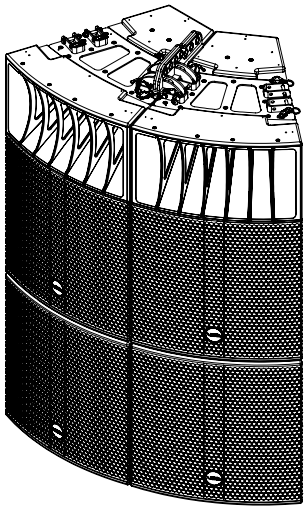
Void Arclite Flybar Shackle hole position



Step 1

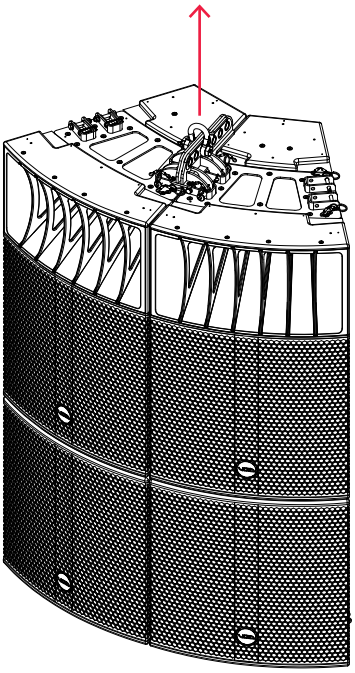
Ensure Rigging is pinned together as per the Arclite and Arclite 15B Rigging Guidance.

Ensure Flybar is attached as per “Flying a two configuration Arclite Array” Flying Procedure.



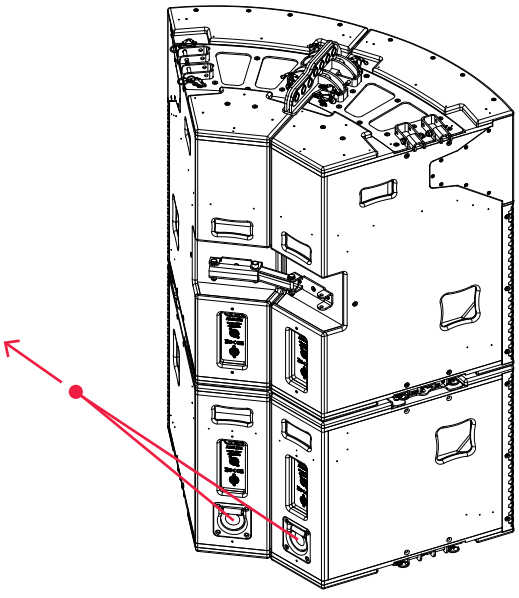
Step 2

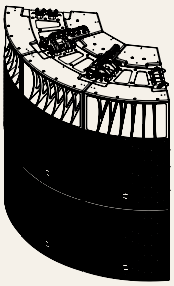
Lift the system with the shackle on one of the allowed hole positions.



Step 3

Angle is determined with the use of a secondary guide wire. A 2-leg master link sling is used on the snap back shackle located at the lower rear of the Arclite 15B.





8.5 Flying a three configuration Arclite and Arclite 15B Array

Rigging Accessories

IT4269	Arclite Speaker x3
IT6066/IT6067	Arclite 15B Speaker x3
IT4165	Rigging Mounting Plate x6
N/A	Rear Connector Plate x3
IT6061 & IT6062	Inner Right and Left Rigging Plate x3
IT6057	Outer Rigging Plate x3
IT4310	Flybar x2
N/A	GreenPin Shackle WLL 2T x2
IT6342	Arclite Lift Beam x1
N/A	1 Leg Master Link Sling (not supplied) x3
N/A	2 Leg Master Link Sling (not supplied) x1

Risks

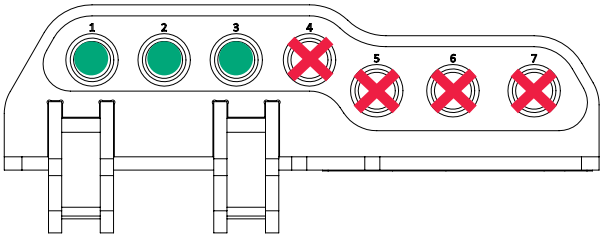
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

Array Orientation: The Arclite and Arclite 15B should not be stacked vertically and can be stacked horizontally up to 3 times in this configuration

Angle Matrix

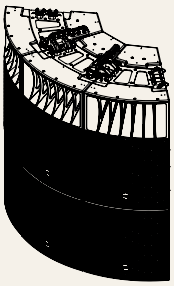
For ALL Arclite and Arclite 15B Arrays, shackle positions 1, 2 and 3 are to be used.



Void Arclite Flybar Shackle hole position

ARCLITE

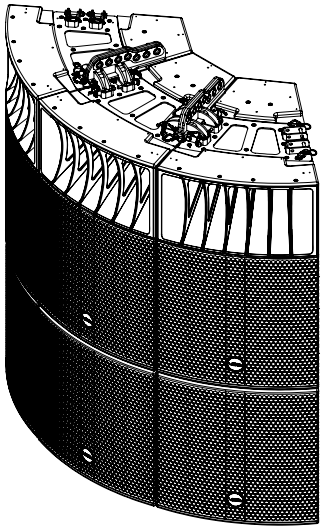
ARCLITE 15B



Step 1

Ensure Rigging is pinned together as per the Arclite and Arclite 15B Rigging Guidance.

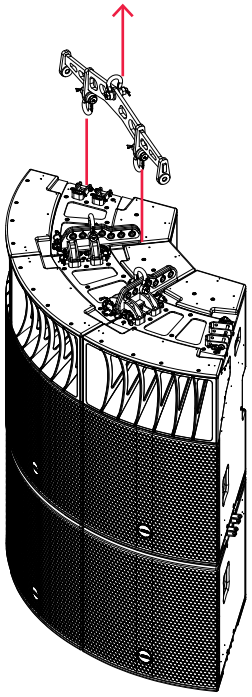
Ensure Flybar is attached as per "Flying a three configuration Arclite Array" Flying Procedure.



Step 2

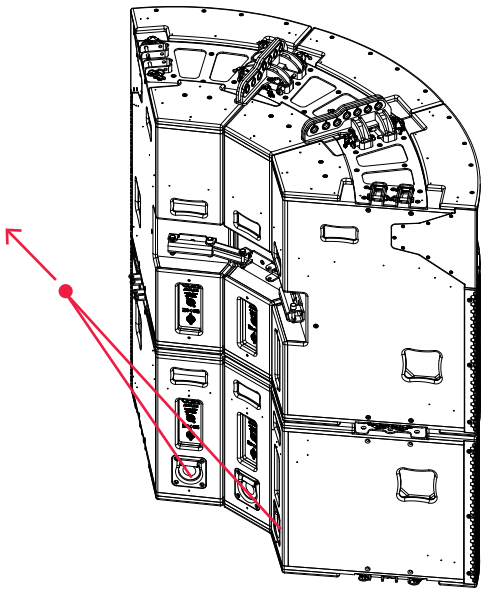
Using the Arclite Lift Beam secure Flybar Shackles to Lift Beam shackles using 1-leg Master Link slings.

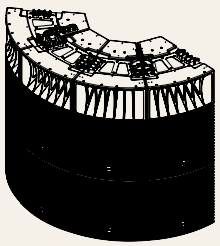
Lift the system from the Arclite Lift Beam using 1-leg master link sling.



Step 3

Angle is determined with the use a secondary guide wire. A 2-leg master link sling is used on the snap back shackle located at the lower rear of the Arclite 15B.





8.6 Flying a four configuration Arclite and Arclite 15B Array

Rigging Accessories

IT4269	Arclite Speaker x4
IT6066/IT6067	Arclite 15B Speaker x4
IT4165	Rigging Mounting Plate x8
N/A	Rear Connector Plate x4
IT6061 & IT6062	Inner Right and Left Rigging Plate x4
IT6057	Outer Rigging Plate x4
IT4310	Flybar x2
N/A	GreenPin Shackle WLL 2T x2
IT6342	Arclite Lift Beam x1
N/A	1 Leg Master Link Sling (not supplied) x3
N/A	2 Leg Master Link Sling (not supplied) x1

Risks

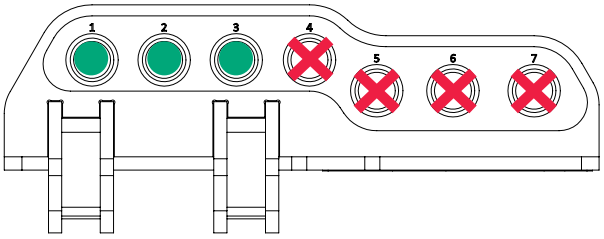
Falling Objects: Verify that no unattached items remain on the product or assembly

Secondary Safety: Use available holes on the rigging accessories to implement a secondary safety

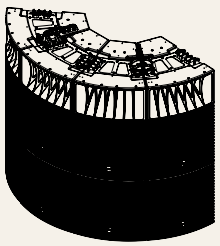
Array Orientation: The Arclite and Arclite 15B should not be stacked vertically and can be stacked horizontally up to 4 times in this configuration

Angle Matrix

For ALL Arclite and Arclite 15B Arrays, shackle positions 1, 2 and 3 are to be used.



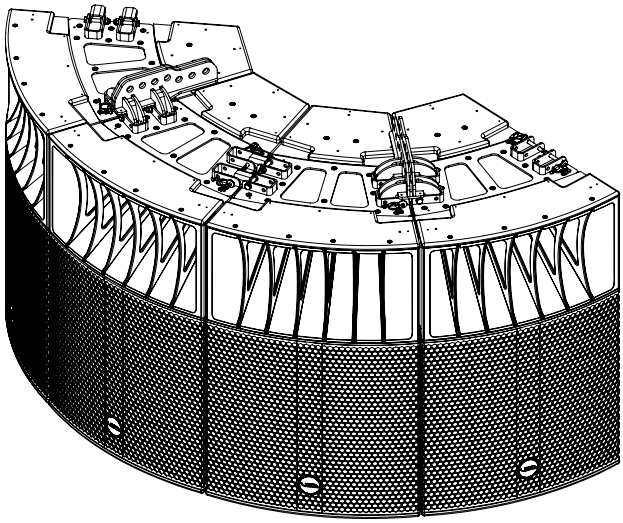
Void Arclite Flybar Shackle hole position



Step 1

Ensure Rigging is pinned together as per the Arclite and Arclite 15B Rigging Guidance.

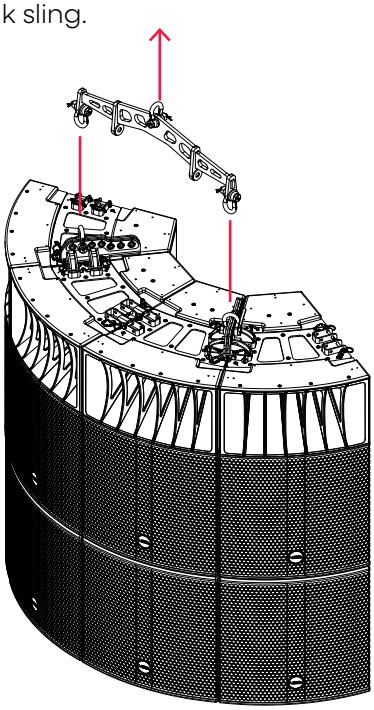
Ensure Flybar is attached as per “Flying a three configuration Arclite Array” Flying Procedure.



Step 2

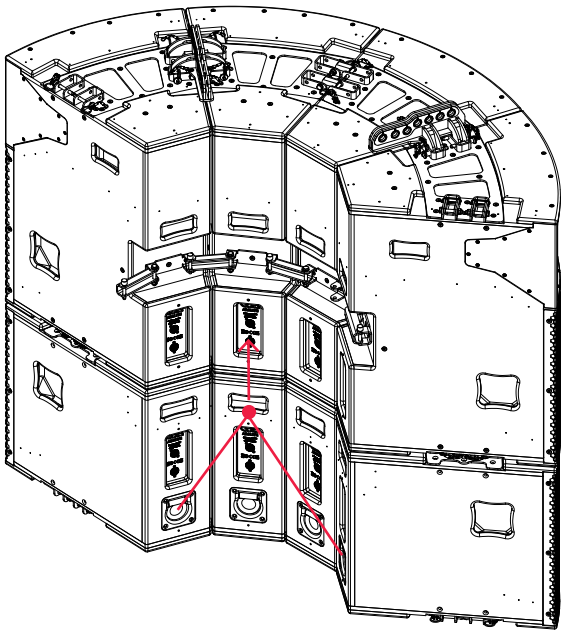
Using the Arclite Lift Beam secure Flybar Shackles to Lift Beam shackles using 1-leg slings.

Lift the system from the Arclite Lift Beam using 1-leg master link sling.



Step 3

Angle is determined with the use a secondary guide wire. A 2-leg master link sling is used on the snap back shackle located at the lower rear of the Arclite 15B.



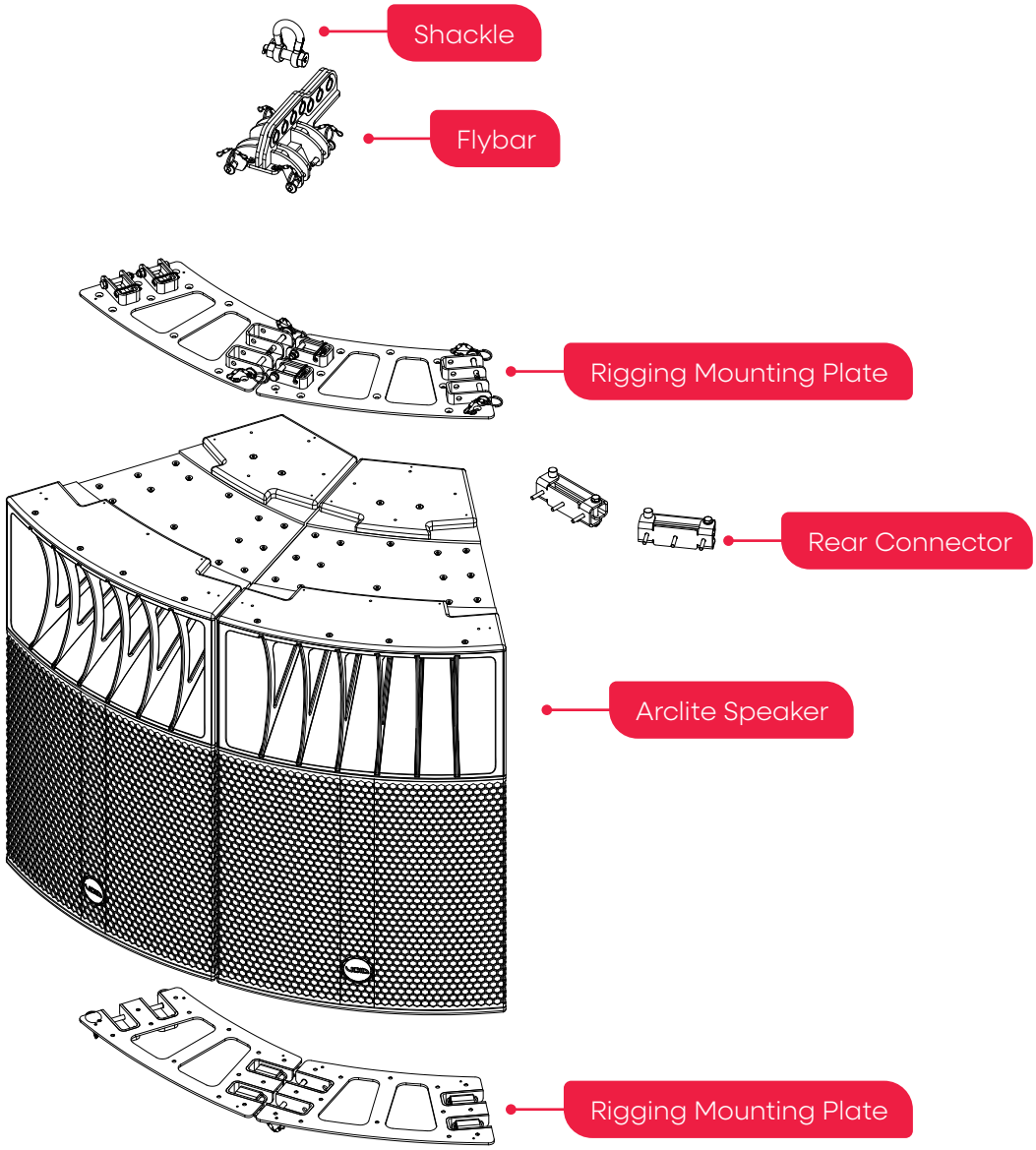
9.0 Maintenance

9.1 Corrective Maintenance

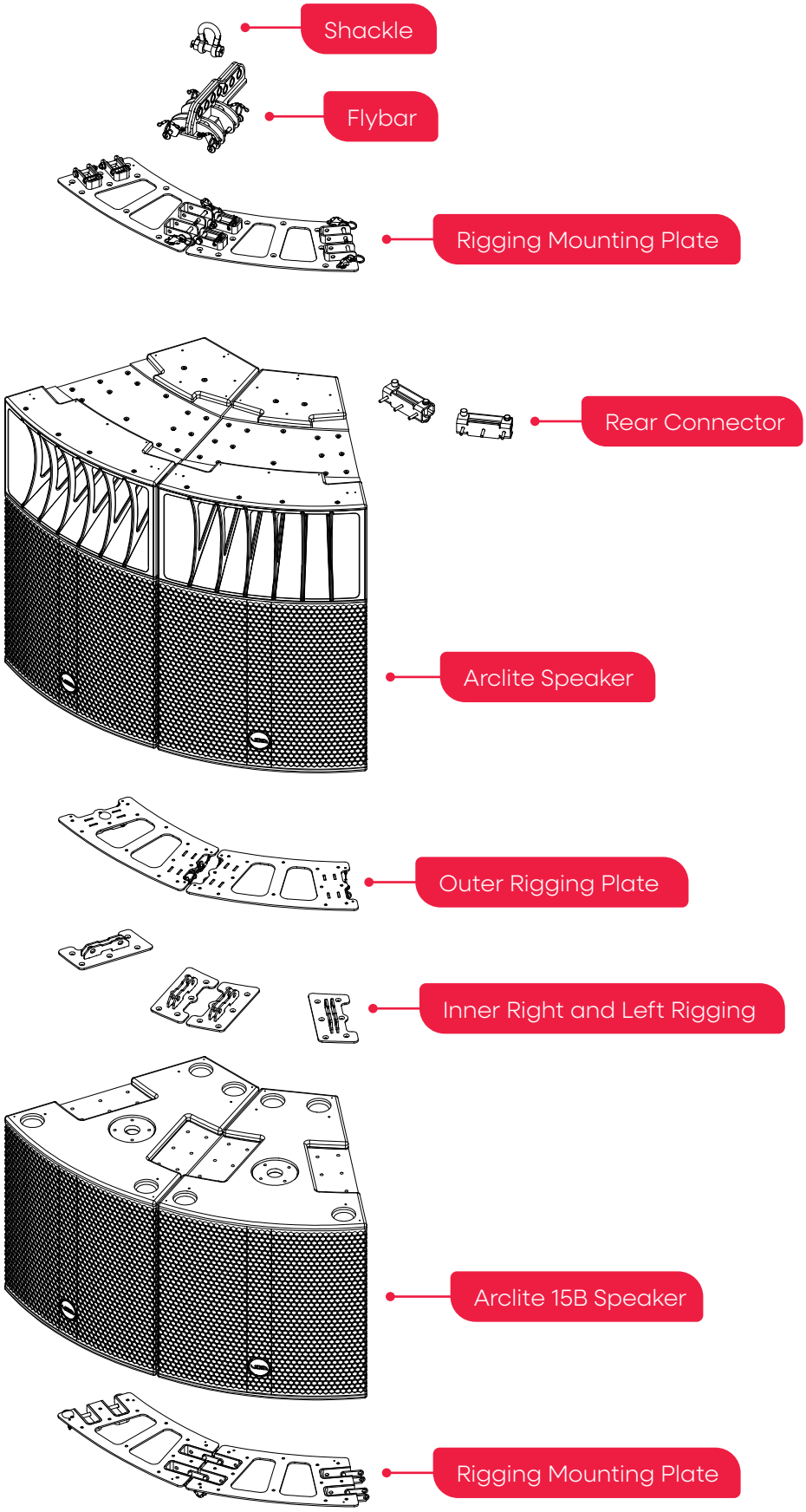
Before performing maintenance on the rigging or flying equipment, disassembly may be needed. No specialist tooling is needed, all components are assembled with the use of Quick Release Pins, Clevis Pins and M6 Socket Head Screws, all of which is supplied. Tools needed will consist of an Allen Key Set or Screwdriver and Hex Bit set.

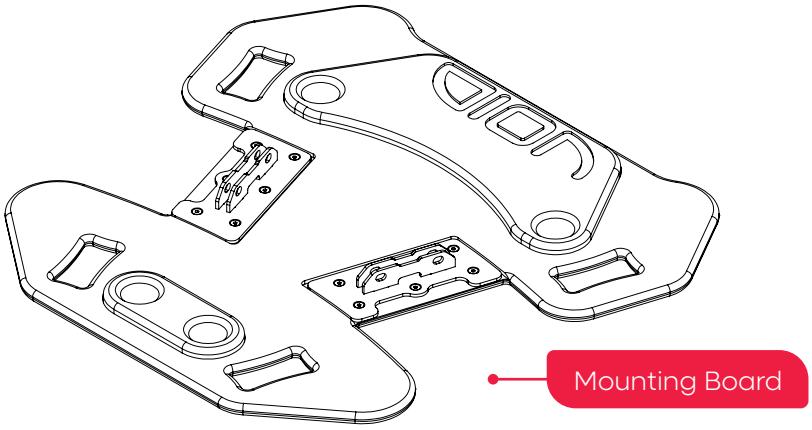
9.2 Maintenance Procedures

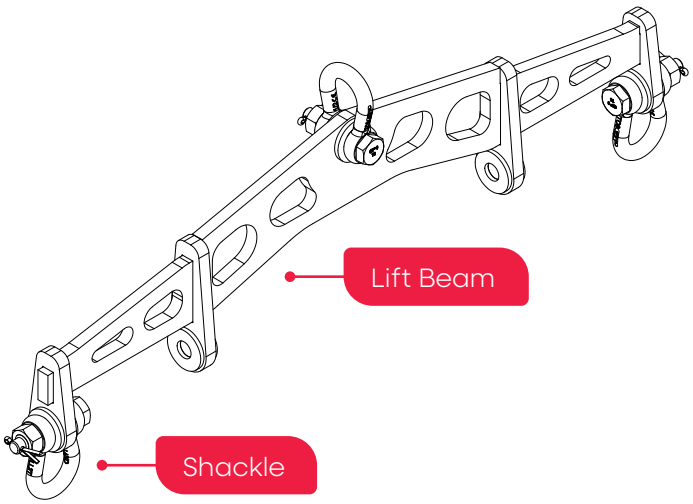
Arclite Exploded Assembly and Components



Arclite and Arclite 15B Exploded Assembly and Components




Mounting Board


Lift Beam
Shackle

10.0 Safety

10.1 Rigging Safely

- To avoid mechanical hazards, please note the following:
- Safety regulations vary in different regions. Full compliance with those regulations must be your priority
- Keep clear of rigging operations if you are tired, distracted, unwell or suffering from the effects or after-effects of medication, alcohol or drugs
- Rigging and stacking must only be undertaken by fully qualified and experienced riggers in full compliance with local, national and international regulations
- 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
- Ensure that you watch the rig and its motors during motor operations. Do not allow yourself to be distracted by inclinometer readings etc. The inclinometer meter may be checked each time the rig is stopped •
- Do not use a telephone (even if hands-free) whilst rigging. Always concentrate fully on the rigging operation
- Do not rig equipment that is worn, damaged, corroded, mishandled or over-stressed in any way
- Do not fly more than 4 Arclite's and Arclite 15Bs
- Do not stack more than 1 Arclite and 15B line array vertically.
- Use only Void-approved accessories.

10.2 Inspection and Preventive Maintenance

Inspect the system before any deployment and after any corrective maintenance operation. Perform preventive maintenance at least once a year.

Rigging and hardware

- Perform the Rigging part inspection on each rigging part.
- Do the Rigging check. If any parts are damaged, contact your Void Acoustics representative for further instructions.

Rigging Part Inspection

For critical rigging parts, use the Inspection references below for comparison and specific manipulations.

- The term “rigging part” comprises:
- Lifting accessories such as clamps and shackles
- Rigging accessories such as rigging frames, rigging interfaces, and brackets
- Fasteners used for assembling two products together such as ball-locking pins, rigging axes, and safety pins
- Rigging elements integrated in the product such as rigging arms and rails

Transportation accessories

This inspection procedure covers only Void Acoustics products.

To inspect other products that are part of the lifting chain, refer to the manufacturer’s instructions.

Prerequisite

- Perform the inspection in a well-lit environment.

Procedure

- Check that the rigging part is present.
- If applicable, disassemble the rigging part from the enclosure or the rigging accessory.
- Check that the tethers are intact and safely secured.
- Inspect the part from every side.
- Compare with the reference pictures.

Check for:

- ☐ Corrosion
- ☐ Wear and cracks
- ☐ Bends and dents
- ☐ Holes
- ☐ Missing safety cues
- ☐ Missing identification
- ☐ Missing or loose fasteners

Replacing screws

If a screw is loose, remove and replace it, always use the new screws provided in the repair kit. If no new screw is available, add blue thread locker before reusing the screw. Do not apply more than the indicated torque.

Geometry

Check the geometry of the part to identify critical deformations.
Place the rigging part on a flat surface or hold a level against it.

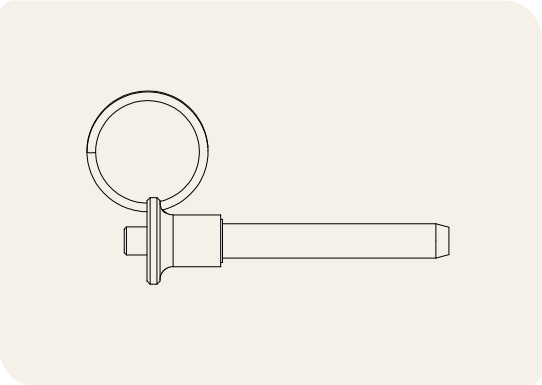
Moving Parts

Check the moving parts. Make sure that the mechanism engages correctly.

What to do next If a problem is detected?

Perform the authorized maintenance operations or contact your Void Acoustics representative.

Inspection Reference



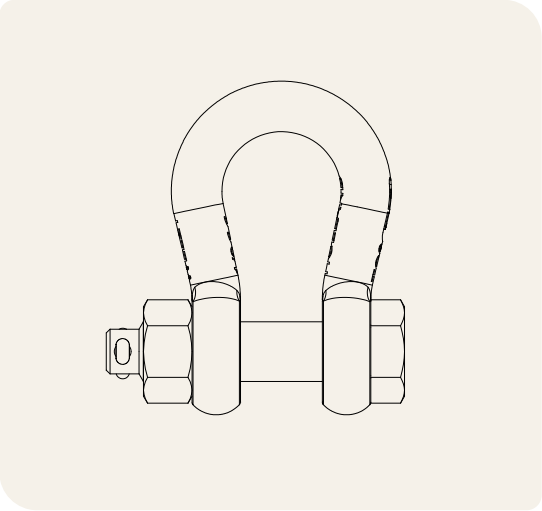
Quick Release Pins

- Tethers are intact and secured.
- Test Ball-Locking mechanism.
  - Press push button. The ball locking mechanism should retract.
  - Release push button. The ball locking mechanism should be active.
  - Test in storage and rigging holes. Pin must remain in hole.

Pre-Use Inspection

If any of the follow defects are found, refer to a competent person:

- Illegible or unclear markings.
- Distorted, worn, stretched or bend body or pin.
- Damaged ball pin.
- Nicks, gouges, cracks or corrosion.
- Incorrect pin.



Shackle

- Ensure the pin is screwed fully into the shackle eye.
- Check that the thread if fully engaged with the body.
- Ensure nut is jammed on the inner end of the thread and not the eye of the shackle.
- Ensure split cotter pin is fitted before lift.

Pre-Use Inspection

If any of the follow defects are found, refer to a competent person:

- Missing or out of data report.
- Illegible or unclear markings of SWL
- Distorted, worn, stretched or bend body or pin.
- Damaged or income thread forms.
- Nicks, gouges, cracks or corrosion.
- Incorrect pin.

Maintenance requirements are minimal. Keep shackle clean, the threads free of debris and protect from corrosion.

11.0 Service

11.1 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.

11.2 Shipping and packing considerations

- When sending a Void Arcline 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.

12.0 Appendix

12.1 Arclite architectural specifications

The loudspeaker shall be a two-way active, three-way arrayable point source, featuring an asymmetrical combination waveguide and horn, consisting of one high power reflex loaded 15" (381 mm) low frequency (LF) transducer, with a two way, mid-high (MHF) coaxial ring radiator compression driver.

The low frequency transducer shall be constructed on a rigid metal frame, featuring a 4" (101 mm) voice coil, wound with copper wire on a high-quality voice coil former, for high power handling and long-term reliability. The high frequency coaxial ring radiator shall project its sound through a high precision proprietary waveguide with asymmetrical horn mouth.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 45 Hz to 18 kHz (±3 dB) for a single enclosure; shall average 35° directivity pattern on the horizontal axis and 60° on the vertical one (25° up - 35° down) (-6 dB down from on-axis level) from 1 kHz to 12 kHz.; maximum SPL of 139 dB peak measured at 1 m using IEC268-5 1/3 Oct pink noise. Power handling shall be 1000 W AES for the LF section at a rated impedance of 8 Ω and 190 W AES for the HF section at a rated impedance of 16 Ω. The wiring connection shall be via two 4-pin locking connector. One for input and one for loop-out to another speaker, to allow for pre-wiring of the connector before installation.

The enclosure shall be constructed from 15 mm multi laminate birch plywood, finished in a textured polyurea and shall contain fixing points so that rigging can be attached to array multiple units. External dimensions shall be (H) 793 mm x (W) 510 mm x (D) 559mm (31.3" x 20.1" x 22") . The weight shall be 44 kg (97lbs).

The loudspeaker shall be a Void Acoustics Arclite.

12.2 Arclite 15B architectural specifications

The loudspeaker shall be comprised of a single 15” (381 mm) direct radiating, reflect loaded, low frequency (LF) transducer in a birch plywood enclosure.

The enclosure shall be constructed from 15 mm multi-laminated birch plywood with handles on the side, a wraparound grille, spring loaded snap back shackle and a rotating badge; it shall feature an M20 top hat and shall be finished in a textured TourCoat polyurea with external dimensions of (H) 523 mm x (W) 510 mm x (D) 561 mm (20.6” x 20.1” x 22.1”).
Weight is 28.5 kg (63 lbs).

Performance specifications of a typical production unit shall be as follows: frequency response of 45 Hz - 569 Hz (+3 dB from rated sensitivity); Power handling shall be 1000 W AES at a rated impedance of 8 Ω.

The wiring connection shall be via two 4-pin locking connectors. One for input and one for loopout to another speaker, to allow for pre-wiring of the connector before installation.

The low frequency transducer shall be constructed on a resonant free and heavy-duty basket design with a 4” (101.6 mm) voice coil, wound with copper wire on a high quality former for high power handling and long-term reliability.

The loudspeaker system shall be a Void Acoustics Arclite 15B.

12.3 Changelog

Document Version	Notes	Valid for S.N
TD10710-1.1		All Arclite & Arclite 15B

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