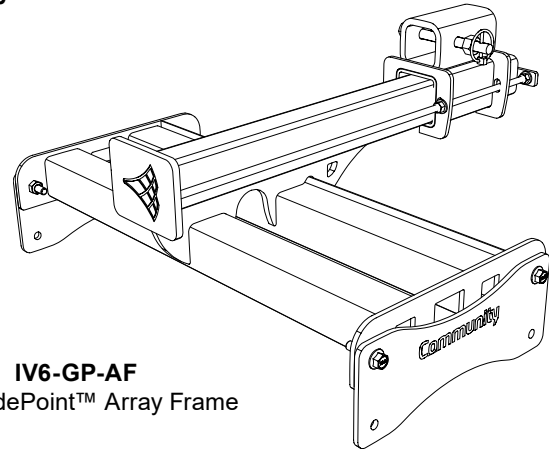


COMMUNITY I SERIES

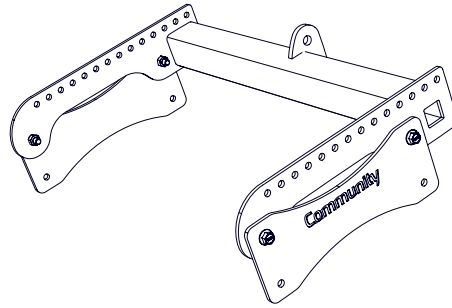
IV6 Rigging Frames, Accessories, and Safety Guide *(Indoor Elements Only)*



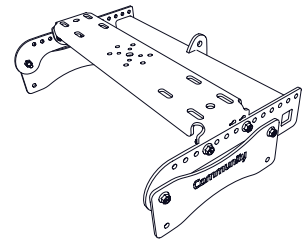
PY1-EN750-1550
Lift Point



IV6-GP-AF
IV6 GlidePoint™ Array Frame



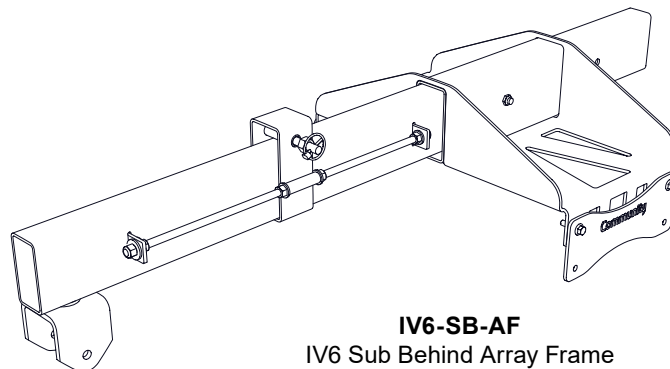
IV6-LAF-PBB
IV6 Light Array Frame/Pullback Bar



IV6-LAU
IV6 Light Array Frame
Adapter U-Bracket
(on the IV6-LAF-PBB)

Modular Vertical Array 600 Indoor Rigging Frames

- IV6-GP-AF
- IV6-LAF-PBB
- IV6-LAU
- IV6-SB-AF
- PY1-EN750-1550



IV6-SB-AF
IV6 Sub Behind Array Frame

IMPORTANT: *The Instructions, illustrations, and rigging assemblies in this manual are to be used with INDOOR IV6 cabinets/models only. The IV6-WR loudspeakers differ in width and mounting points and will NOT fit the indoor array frames. Contact Community for information regarding mounting options for WR (outdoor) IV6 loudspeakers.*

IMPORTANT SAFETY INSTRUCTIONS

Always follow these basic safety precautions when using or installing I SERIES loudspeakers and accessories:

- Read these instructions prior to assembly, and keep for reference.
- Heed all warnings.
- Follow all instructions, particularly those pertaining to rigging, mounting, hanging and electrical connections.
- Do not use this apparatus near water (indoor models only).
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instruction.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Only use attachments and accessories that are specified and approved by the manufacturer.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, does not operate normally, or has been dropped.

The terms caution, warning, and danger may be used in this manual to alert the reader to important safety considerations. If you have any questions or do not understand the meaning of these terms, do not proceed with installation. Contact your local dealer, distributor, or call Community directly for assistance. These terms are defined as:



CAUTION: describes an operating condition or user action that may expose the equipment or user to potential damage or danger.



WARNING: describes an operating condition or user action that will likely cause damage to the equipment or injury to the user or to others in the vicinity.



DANGER: describes an operating condition or user action that will immediately damage the equipment and/or be extremely dangerous or life threatening to the user or to others in the vicinity.

These installation instructions are for use by qualified personnel only. To reduce the risk of fire or electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

RIGGING and ELECTRICAL SAFETY



IMPORTANT: The loudspeakers described in this manual are designed and intended to be mounted to differing indoor building surfaces using a variety of rigging hardware, means and methods. Installation of loudspeakers should only be performed by trained and qualified personnel. All electrical connections must conform to applicable local, county, state, and national electrical codes.

parts will
suspend this



DANGER: All rigging fittings must be fully tightened and secured. Any missing fasteners or compromise the structural integrity of the enclosure and constitute a safety hazard. Do not loudspeaker unless all fasteners are securely in place!



DANGER: It is possible to experience severe electrical shock from a power amplifier. Always make sure that all power amplifiers are in the "OFF" position and unplugged from an AC Mains supply before performing electrical work.



CAUTION: Installation of I SERIES loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting. Severe injury and/or loss of life may occur if this product is improperly installed.

UNPACKING / INSPECTION

Community I SERIES rigging accessories are engineered and manufactured to be rugged and they are carefully packed in sturdy cartons. However, it is recommended to thoroughly inspect each unit after it has been removed from the packaging, as damage could occur during shipping.

Please note that once the shipment has left your dealer or the Community factory, the responsibility for damage is always borne by the freight company. If damage has occurred during shipping, you must file a claim directly with the freight company. It's very important to contact the freight company as soon as possible after receiving your shipment, as most freight companies have a short time limit within which they will investigate claims. Make sure to save the carton and the packing material, as most claims will be denied if these materials are not retained. Your Community dealer and the factory will try to help in any way they can, but it is the responsibility of the party receiving the shipment to file the damage claim.

It is always a good idea to retain the carton and packing materials, if possible, in the event that the unit may need to be returned to your dealer or distributor for repair in the future.





WARNING: I SERIES rigging fittings are rated at Working Load Limits (WLL) with a 10:1 safety margin. All mounting provisions on the IV6 cabinets meet or exceed the 10:1 safety margin to support the cabinet when used with the specified mounting brackets, either from Community or designated 3rd party vendors. Disregarding and/or exceeding the safe working load limits could result in injury or death!

Polar Focus manufactures the rigging frames and splay brackets that Community sells for use with indoor IV6 Modular Vertical Array systems. Polar Focus also manufactures additional mounting accessories that can be used with IV6 systems. Refer to the table on page 18 or their website (www.linearrayframes.com) for additional information.

INSTALLATION BASICS

RIGGING SAFETY

 **IMPORTANT:** IV6 loudspeakers are designed and intended to be mounted to differing indoor building surfaces using a variety of rigging hardware, means and methods. Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting plan. Severe injury and/or loss of life, and property damage may occur if these products are improperly installed.

 **DANGER:** All rigging fittings must be fully tightened and secured. Any missing fasteners will compromise the structural integrity of the enclosure and constitute a safety hazard. Do not suspend any loudspeakers unless all fasteners are securely in place!

ACCEPTABLE MOUNTING POINT LOADING


Use the custom "Rigging Safety Calculator" (RiSC) plugin found under the "Loads" tab in the VenuePolar tab in EASE® Focus 3 (EF3) to assure mounting point system Safe Working Load (SWL) and required Safety Factor are not exceeded. The VenuePolar module is described on pages 4-5. The system should be modeled in EF3 prior to ordering, and the system design report generated should be utilized when installing / assembling the array(s). The software, and system information is available on the Community website. Use the QR code on the lower corner of this page for a link to the IV6 downloads page.

In addition, for sub-behind applications, use the "IV6 Sub Behind Hang Point Calculator" to assure proper deployment of the IV6-SB-AF bracket. It is included in the IV6 Manuals and Tools zip file [here](#).

EASE® and AFMG® are registered trademarks of AFMG Technologies GmbH.

INSTALLATION AND ASSEMBLY TIPS

- Test all cabinets before hanging
- Arrange cabinets in the order that they will hang, and loosely attach appropriate splay brackets to the top of each cabinet
- Set attenuation settings per the EASE® Focus 3 model on each cabinet
- If using the IV6-GP-AF, adjust the carriage on the array frame to the suggested pin setting before attaching the loudspeakers
- Orient cabinets so the horns align along the length of the array - this also aligns the input panels for easy wiring
- Ground-stacked subwoofers should be connected only with S1 splay brackets to prevent any vibration-based movement of the elements
- Leave splay bracket connections slightly loose until all cabinet connections are made, then tighten evenly

 **IMPORTANT:** The hex head Grade 10.9 rigging bolts that are used to secure the splay brackets must also fill any unused holes (at the bottom of a flown array or at the top and bottom of a ground stack) to seal the enclosure from air leaks. If those threaded holes are not sealed, air leaks will occur in the enclosure that will compromise the low-frequency performance with distortion, reduced output, and possible premature driver failure.

Safety Cable

The safety cable and associated hardware are not included. Consult all applicable codes for your application. Confer with a structural engineer for the appropriate cable/hardware for the load, application and locale. If required, the safety cable must be secured to a suitable load-bearing point separate from the array mounting point, with as little slack as possible, so as not to develop undue kinetic force if the primary array mount were to fail.

Light Array Frame (IV6-LAF-PBB)

When required, a secondary safety cable can be attached to an unused hole(s) on the LAF.

GlidePoint Array Frame (IV6-GP-AF)

A secondary safety cable mounting point is available from PolarFocus. Part number: RLP-X2-1800

Sub Behind Array Frame (IV6-SB-AF)

Contact PolarFocus, for a quote for a custom secondary attachment point(s) required for your particular application.



Scan or click to go to the IV6 downloads section on the [Biamp website](#) for the latest version of this manual.

SYSTEM DESIGN

Biamp encourages all system designers to use EASE® Focus 3 (EF3) [v 3.1.14, or later], to model the array. To simplify the IV6 system design and configuration process, we have developed a custom VenuePolar™ plugin for EASE® Focus 3 ([download the latest IV6 GLL here](#)). With VenuePolar, IV6 system designers no longer have to choose cabinet types, number of cabinets, and then adjust the splay, filters and box attenuation to optimize the coverage for audience areas. Instead they can bring in an array, position it and aim it to cover the designated audience areas.

RIGGING SAFETY CALCULATOR (RiSC)

The "Rigging Safety Calculator" (RiSC) plugin is found under the "Loads" tab in the VenuePolar tab. As a designer creates an IV6 array in EF3, the RiSC function automatically populates and updates the information in the Loads tab based on a specified "Safety Factor". An expanded view shows the safety margin achieved at each cabinet junction and displays a warning if the specified safety margin is not achieved.

RiSC calculates the static loads and resultant safety factor for each array cabinet connection point to adjacent cabinets (including loads through the IV6-S1, IV6-S2, and IV6-S3 splay plates) and the top cabinet's attachment to the Array Frame.



IMPORTANT: RiSC should NOT be used to determine the safety factor for arrays deployed outdoors or in any other conditions where additional forces (like wind or vibration) may act upon the array.

To view the RiSC display in EF3, click on the "Loads" tab ([Figure 1](#)). At the top of the "Loads" tab is a box for the user to enter the "Desired Safety Factor" for the array.

Biamp recommends using a 10:1 Safety Factor whenever possible. The RiSC module defaults to a 10:1 Safety Factor value. Consult all applicable codes to determine the required safety factor for your application.

In the lower left corner of the EF3 window, a "Status" notice shows if the Desired Safety Factor conditions have been fulfilled ([Figure 2](#)). If the status displays "condition failed" warning, the array must be re-configured until the status displays "condition fulfilled".

Note: In EF3 the "Desired Safety Factor" on the "Loads" tab is equivalent to the "Global Safety Factor" in the status notifications. "Global" only refers to the selected array. It does NOT mean that the warning refers to all of the arrays in the project. The "Global Safety Factor" status for each array in the project must be checked independently.

Designer's Hint: A number of factors contribute to whether an array fulfills the Desired Safety Factor criteria, including overall array weight, array shape (curvature), and overall array tilt angle. Each array must be checked individually even if constructed identically to another one that passes.

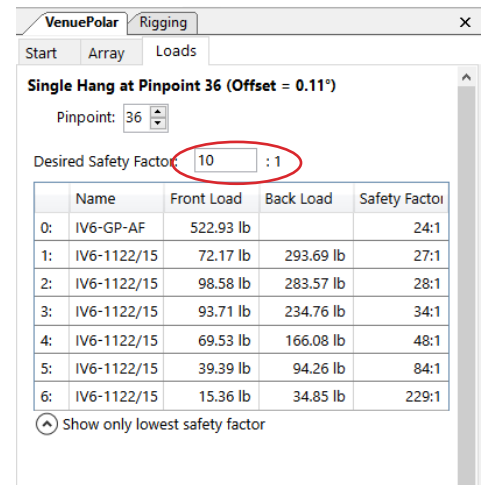


Figure 1. Loads tab
Enter Desired Safety Factor (circle)

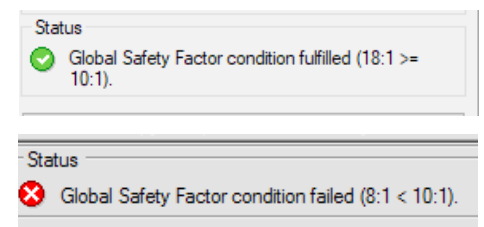


Figure 2. Safety Factor Pass / Fail

RiSC (CONTINUED)

The RiSC portion of the VenuePolar plugin calculates both the safety factor and center of gravity for the arrays as they are configured or changed. Status warnings will also be displayed if a pull back or custom rigging is necessary. The "Loads" tab in the VenuePolar plugin will also indicate the same warnings. Custom rigging is indicated if the array's CoG is forward of the front-most pinpoint. A pull back bar is indicated if the CoG is behind the rear-most pinpoint. If a pull back bar is added, VenuePolar will calculate and immediately display the updated safety factor values and the suggested pinpoint. When using the IV6-LAF-PBB as a top frame, you can also choose a single or double hang options (double hang is the default option).

By default, the "Loads" tab shows a simplified RiSC summary for the array, displaying only the connection point in the array with the LOWEST Safety Factor (Figure 4A). To view the loads and safety factors for all connection points in an array, expand the table by clicking on the arrow next to "Show all cabinets" (Figure 4B, 4C).

The loads and safety factor values will update automatically, in real time, as changes are made to the array size, curvature, aiming angle, pinpoint, cabinet type, array frame, etc.

IMPORTANT SAFETY NOTE: Biamp recommends a minimum of 10:1 safety factor. Biamp also recommends that every system design be reviewed by a licensed Professional Engineer (PE) in the USA or an appropriate certification body in other countries.

THE PROJECT REPORT

The expanded loads and safety factor values, along with the "Status" confirmation messages are included in the "Sound Source" sections of the EF3 Project Report. In EF3 click on "File", then "Create Report". This PDF report includes all of the important information about the array, including cabinet types, aiming angles, array frame types, acoustic simulation results, etc. (Figure 5). This makes it easy to inform customers, engineers, installers, AHJ's (Authorities Having Jurisdiction) or any other stakeholders of the array design status and critical design parameters.

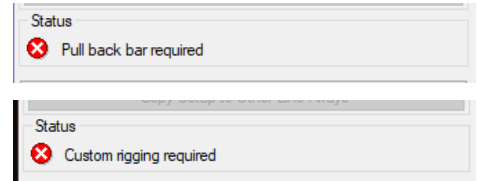


Figure 3. Pull back or custom rigging warnings

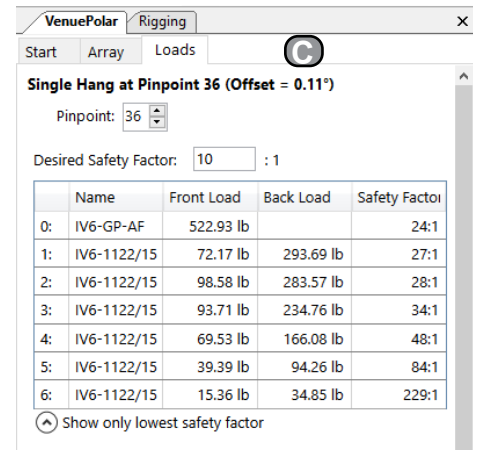
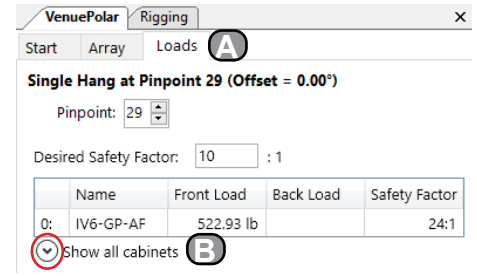


Figure 4.
A. Loads tab
B. Toggle to show all cabinets
C. All cabinets shown

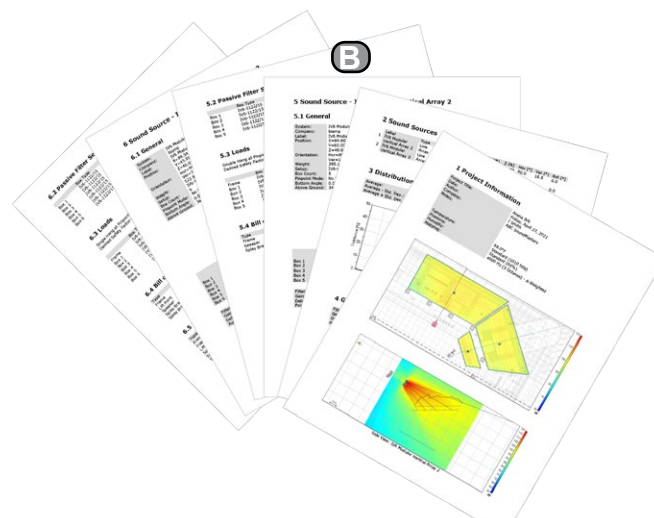
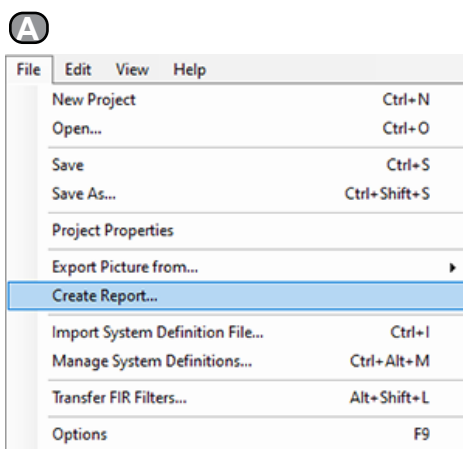


Figure 5. EF3 Project report
A. Create the report
B. Pages from a sample report

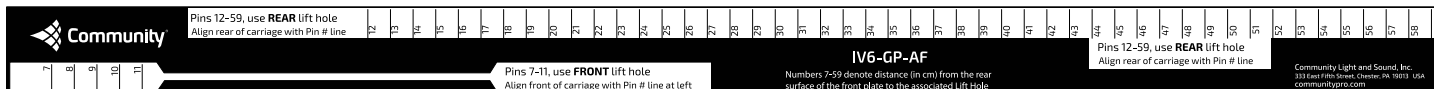
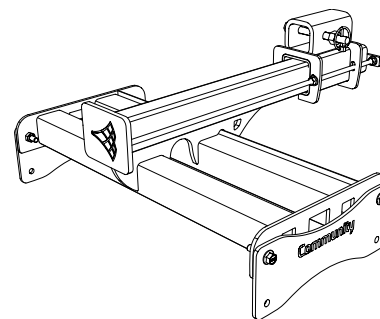
GLIDEPOINT™ ARRAY FRAME

Designed to suspend a maximum* of sixteen (16) IV6 -1122 or nine (9) subwoofers in a single indoor array with a 10:1 safety factor.

APPLICATION: Suspend and aim a loudspeaker array from a single adjustable point.

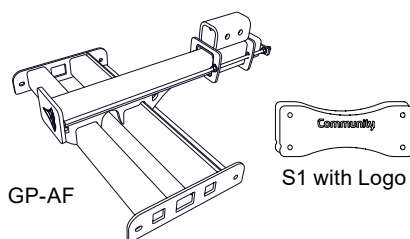
Before assembly: Retrieve rigging and Pin# (pinpoint) from the sound source loads information in EASE® Focus 3 (EF3).

The Pin# information from the rigging section of EF3 represents the distance (cm) from the back of the front logo plate to the designated lifting point. Pins 1-6 do not exist due to the offset of the front lift point on the carriage.



IV6-GP-AF carriage placement label

Parts:



IV6-GP-AF

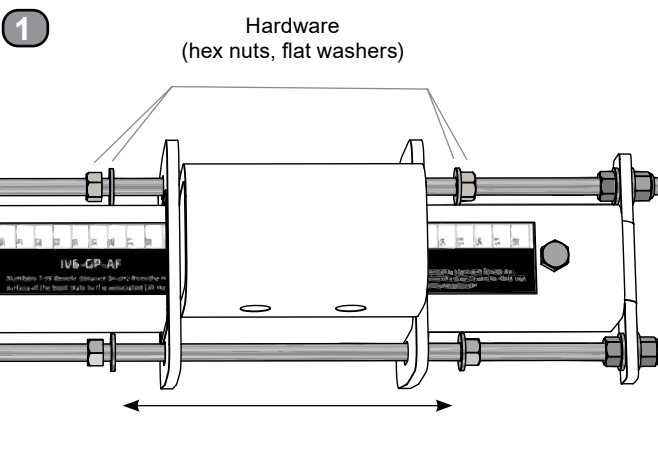
- GP-AF:** GlidePoint Array Frame (1)
- S1 with Logo:** Splay brackets w/logo (2)

Hardware:

Qty	Code	Description
4	HFB-F	Grade 10.9 Flanged Hex Head Bolts
4	HN-F	Flanged Nuts
1	C-HB	Carriage Hex Bolt
1	C-HN	Carriage Hex Nut
1	LR	Locking Ring

Kit Weight: 76 lbs (34.5 kg)

Working Load Limit: 1300 lbs (589.7 kg)
(10:1 safety factor)



GP-1. Loosen carriage hardware, move the carriage to suggested pin# position, and re-secure hardware

ASSEMBLY

1. Move the carriage to the pin setting suggested by the Loads panel following the system design in EF3. Loosen the nuts on the rods enough to slide the carriage to the pin# line and then tighten the nuts on both sides to secure it. Follow instructions on the frame label regarding carriage alignment and which lift hole to use:

- Pin# 7-11 align front of carriage with pin # line, and use front lift hole
- Pin# 12-59, align rear of carriage with the pin# line and use rear lift hole

INSTALLER'S HINT: With most small to medium-size arrays, the carriage location can be changed while under load (with the array attached and in the air). This is helpful, when the recommended pinpoint is farther back on the frame. The carriage can be started toward the front to keep the array relatively level as it is being built, and then moved back as the array gets longer.

- Loosen the nuts on the side of the carriage in the direction it should be moved.
- The carriage can be moved by hand if there isn't too much weight on the frame, or "tighten" the nuts (with a wrench) on the other side of the carriage to move it along the threaded rods.
- After the carriage is in its final position (and the system is aimed), one at a time, loosen each nut a few threads, apply a drop of red thread-locking compound, and re-tighten the nut. This will help prevent movement of the carriage over time.

***NOTE:** Additional loudspeakers above the suggested maximum may be added to the array when using an IV6-LAF-PBB (pull back bar) to share the load. Please refer to the "Loads" tab in EF3 to ensure that the desired safety factor is not exceeded. Additional rigging accessories are available from Polar Focus - See table on Page 18 of this manual.

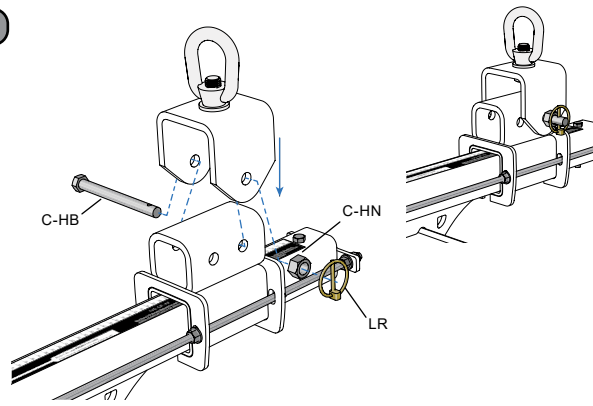
GLIDEPOINT ARRAY FRAME (CONTINUED)

ASSEMBLY (CONTINUED)

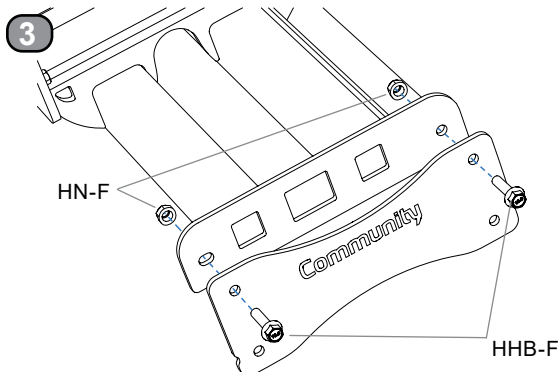
2. Attach the lift point to the appropriate hole in the carriage with the included carriage hex bolt and secure with a hex nut and locking ring.

3. Using the flanged Grade 10.9 bolts and nuts, loosely attach the S1 brackets to the array frame with the Community name facing out.

2



GP-2. Attach the lift point to the carriage using the designated lift hole (PY1-EN750-1550 shown)



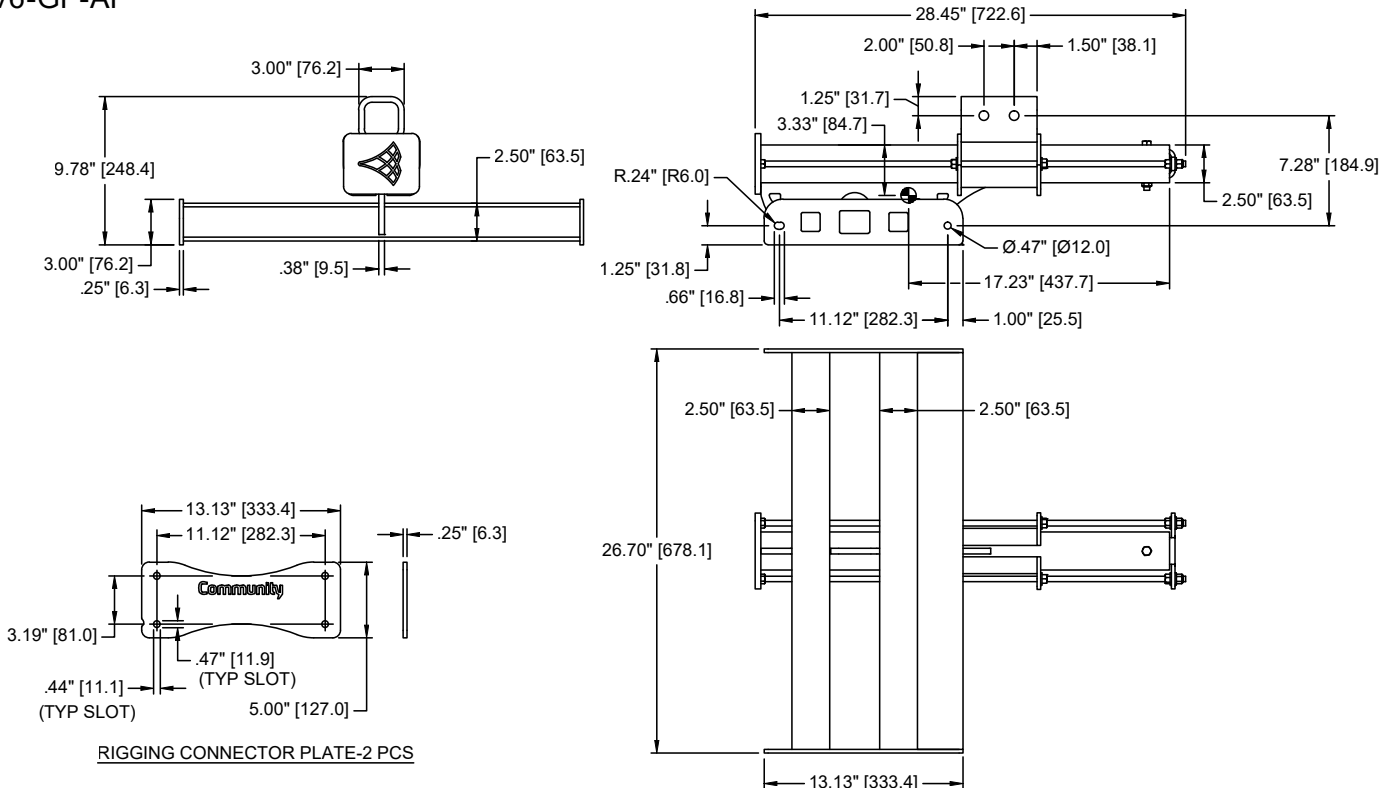
GP-3. Loosely connect the splay brackets to the frame with "Community" facing out



IMPORTANT: Leave bracket hardware slightly loose until the cabinet is attached to the brackets. This allows cabinet to fit between the brackets easily. After all eight (8) bolts are started, fully tighten bolts. Do not place under load until connections are tight!

Technical Drawing

IV6-GP-AF



LIGHT ARRAY FRAME / PULLBACK BAR

APPLICATION: Suspend a small indoor loudspeaker array of up to ten (10)* IV6-1122 elements or provide pullback point for a larger curved array.

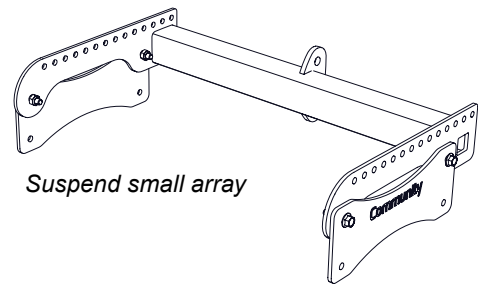
Before Assembly: Record the Pinpoint from the Loads tab in the VenuePolar Tab (or the EF3 report) to define the lift points for the array. Refer to the Pinpoint Reference on the next page.

ASSEMBLY

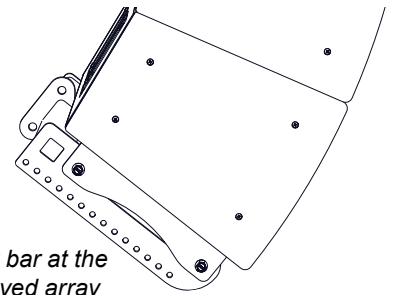
1. If the frame will be at the top of an array, position the S1 splay brackets against the array frame with the Community name facing out. Loosely attach the brackets with the flanged Grade 10.9 bolts and nuts.

Note: If the frame is being used as a pullback bar at the bottom of the array, reverse the plates, turning the Community art inward.

2. Attach the splay bracket to the IV6 cabinet as shown in the array assembly instructions. Leave all connections slightly loose until all frame-to-cabinet bolts are started, then tighten the hardware.



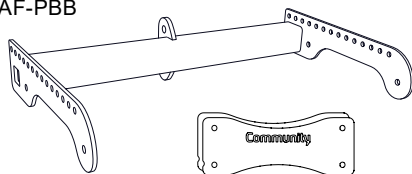
Suspend small array



Use as pullback bar at the bottom of a curved array

Parts:

LAF-PBB



S1 with Logo

IV6-LAF-PBB

LAF-PBB: Light Array Frame (1)

S1 w/ Logo: Splay brackets w/wordmark (2)

Hardware:

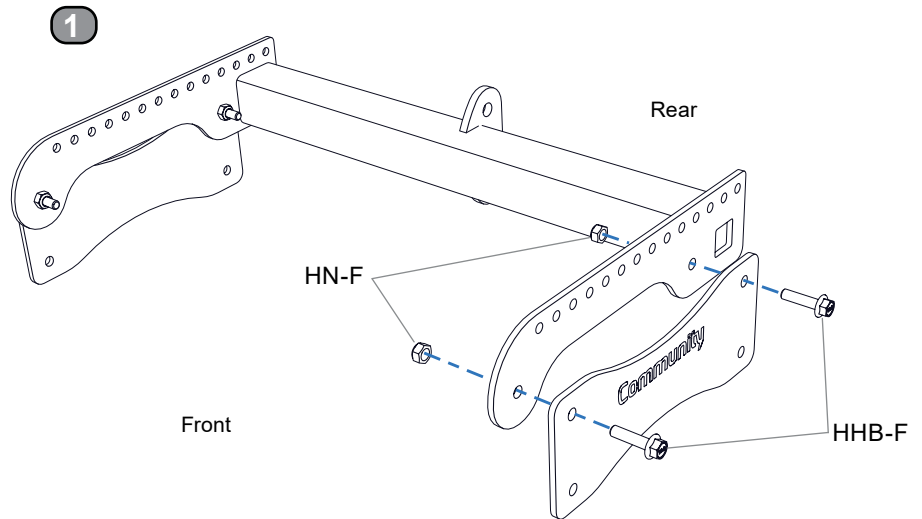
Qty	Code	Description
4	HNB-F	Grade 10.9 Flanged Hex Head Bolts
4	HN-F	Flanged Nuts

Kit Weight: 23 lbs (10.4 kg)

Working Load Limit: (10:1 safety factor)

As a **Light Array Frame:** 850 lbs (385.6 kg)

As a **Pullback Bar:** 1600 lbs (725.7 kg) at the cable attachment tab



LAF-1. When used at the top of an array, use the Grade 10.9 hardware, loosely connect the splay brackets to the array frame with "Community" facing out

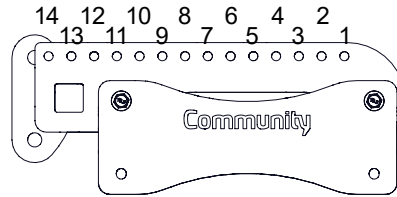
***NOTE:** Additional loudspeakers above the suggested maximum may be added to the array when using an IV6-LAF-PBB (pull back bar) to share the load. Please refer to the "Loads" tab in EF3 to ensure that the desired safety factor is not exceeded.



IMPORTANT: Leave bracket hardware slightly loose until the cabinet is attached to the brackets. This allows cabinet to fit between the brackets easily. After all eight (8) bolts are started, fully tighten bolts. Do not place under load until connections are tight!

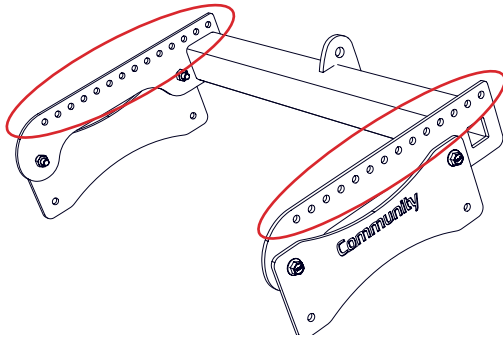
LIGHT ARRAY FRAME / PULLBACK BAR (CONTINUED)

PINPOINT REFERENCE



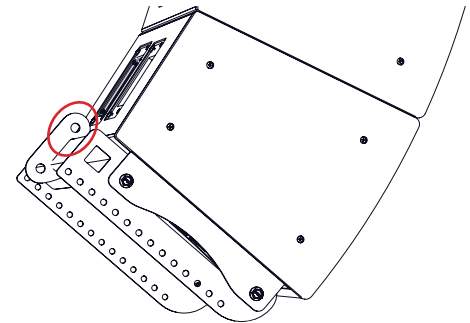
Pinpoint reference for suspension
(Pinpoint number from EF3)

USED AS LIGHT ARRAY FRAME



Connect suspension hardware to upper holes
along the side rails (circled)
Use defined Pin# from EF3 for the lift points

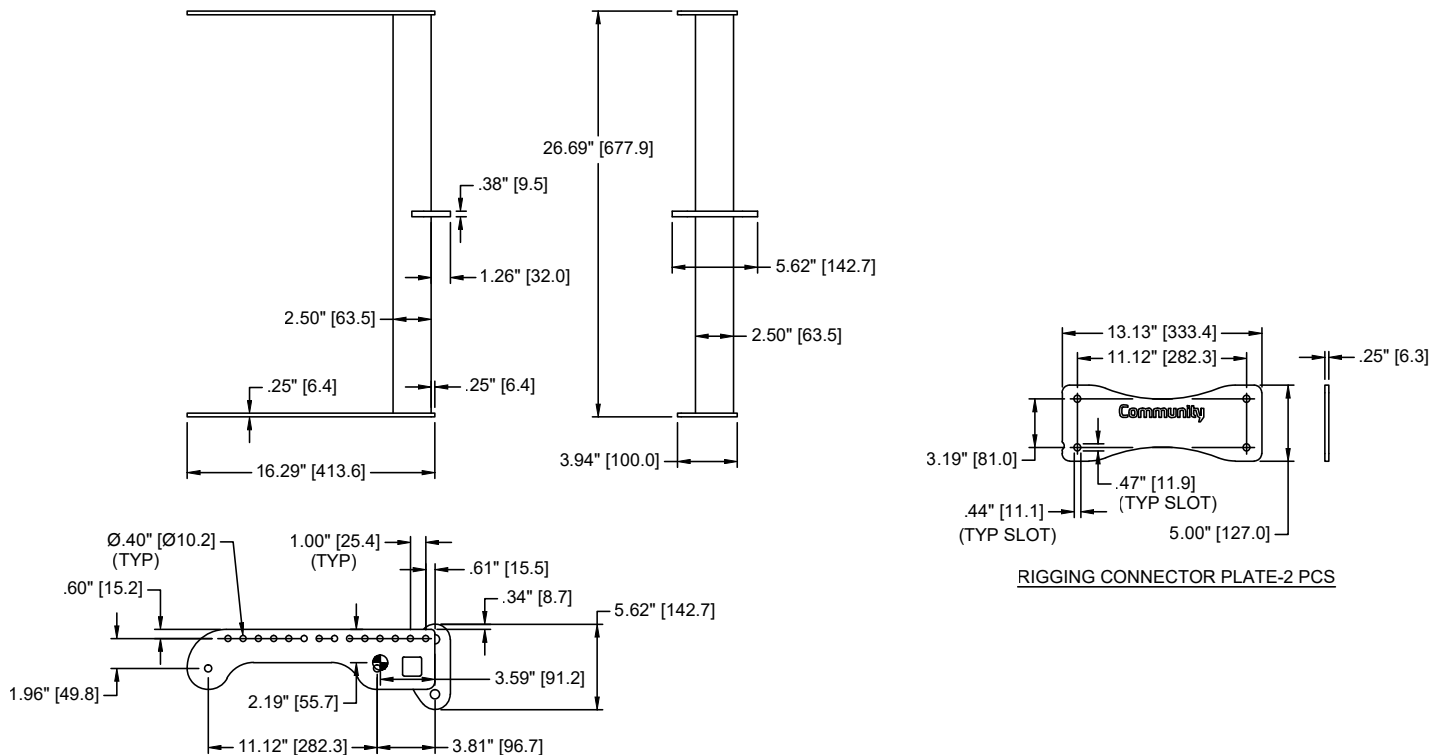
USED AS PULLBACK BAR



Connect pullback cable hardware to the upper hole of
the center tab (circled) welded to the square tube

Technical Drawing

IV6-LAF-PBB



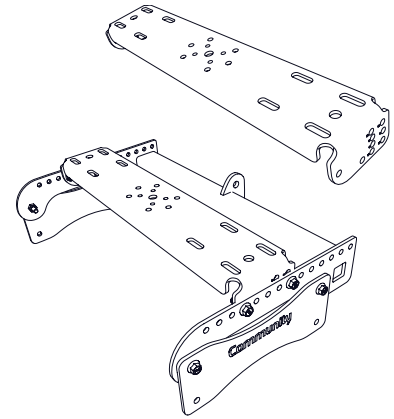
LIGHT ARRAY FRAME ADAPTER U-BRACKET

The IV6-LAU **must** be used with the IV6-LAF-PBB Array Frame. It is designed to support a variety of ancillary array mounting configurations and as a tool to integrate IV6 indoor arrays with I SERIES BalancePoint™ Flyware and other 3rd party mounting systems.

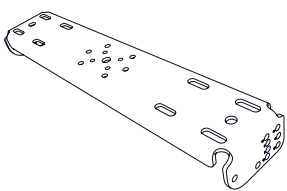
Before assembly: The IV6-LAU U-Bracket must be used with the IV6-LAF-PBB to integrate with an IV6 array. Determine tilt angle and approximate center of balance of the array for placement on the light array frame.

1. Attach the U-Bracket to the IV6-LAF-PBB as shown (LAU-1). Insert bolts in the "pivot" position first (see below) and then secure desired angle with the other bolt. There is a slightly different connection for downfill applications - see LAU Application #5.

Note: In close surface mount applications, it is easier to mount the U-Bracket to the surface before adding the IV6-LAF-PBB frame and loudspeakers.



Parts:



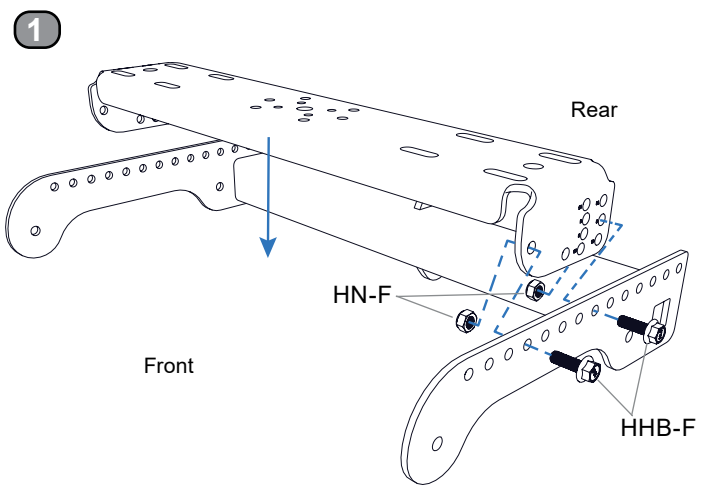
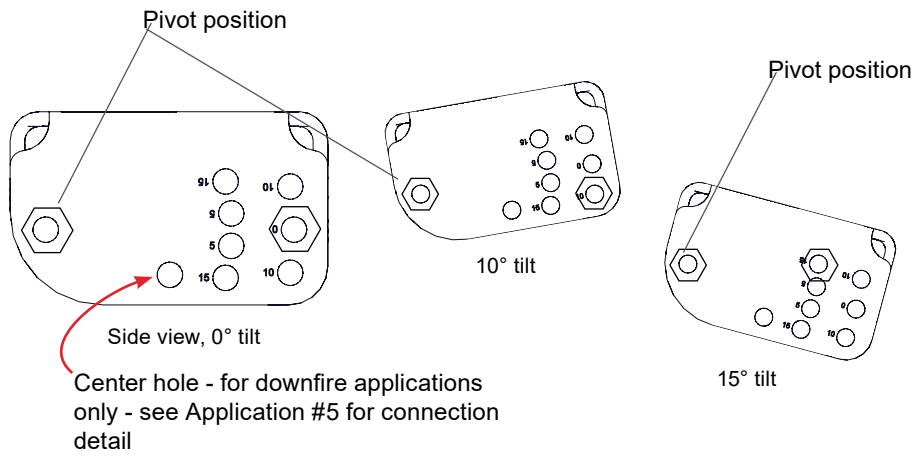
LAU

IV6-LAU
LAU: Light Array U-Bracket (1)

Hardware:

Qty	Code	Description
4	HFB-F	Grade 10.9 Flanged Hex Head Bolts
4	HN-F	Flanged Nuts

Kit Weight: 13.5 lbs (6.1 kg)
Working Load Limit: 500 lbs (226.8 kg)
 (10:1 safety factor)



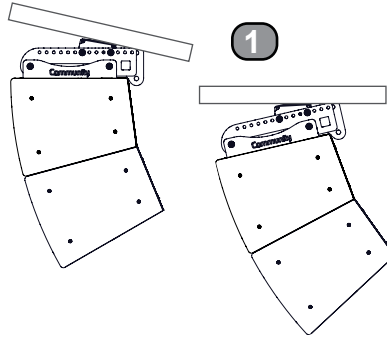
LAU-1. Attach the U-bracket to the frame at the desired angle, centered around the specified pin point# from EASE® Focus 3

IMPORTANT: When used with the IV6-LAF-PBB to hold a downfill loudspeaker at the bottom of an array, the weight of the added elements must be considered when calculating the SWL of the array.

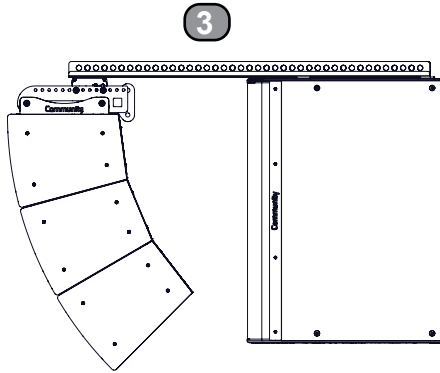
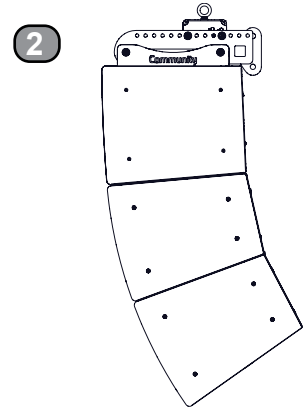
WARNING: For safety reasons, for the applications listed on the next page, the center of mass of the array **must** be located directly beneath the IV6-LAF-PBB Frame. If the center of mass is located behind the array frame, it may result in an unsafe rigging condition.

IV6-LAU APPLICATIONS

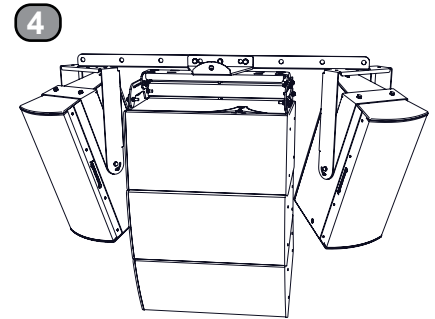
1. Under-balcony mount for a two to three element IV6 array. The LAU provides a very low profile mechanism for rigidly mounting a small array to a solid overhead surface. The built-in 0°, 5°, 10°, and 15° aiming options allow adjustments to the overall array aiming angle.



2. Suspend an array of up to three (3) IV6-1122 elements from one or more load-rated eyebolt(s) or other similar sized load-rated lifting hardware. For this application, the IV6-LAU must be bolted to the IV6-LAF in the 0° position.



3. Suspend I SERIES 600 or I SERIES 800 subwoofers behind an array of up to three (3) IV6-1122 elements using the BalancePoint Flyware SBR54 (54" long Sub Behind Fly Rails). For this application, the IV6-LAU must be bolted to the IV6-LAF in the 0° position.



4. Suspend an array of up to **three (3)** IV6-1122 elements using the BalancePoint Flyware IAF55 (55" wide Isometric Array Frame). The IAF55 allows flying a central IV6-1122 array with additional I SERIES fill speakers to the left and right. The IAF55 may also be combined with the SBR54. For this application, the IV6-LAU must be bolted to the IV6-LAF-PBB in the 0° position.

I SERIES BalancePoint Flyware instructions are available by following this link to the Biamp website <[here](#)> and finding BalancePoint Flyware.



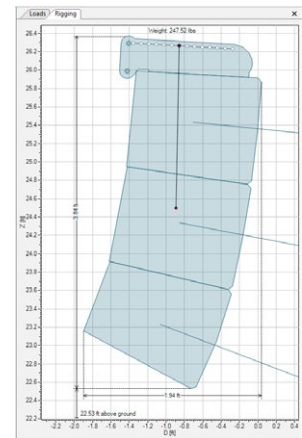
IMPORTANT: No more than three (3) cabinets should be mounted to the IV6-LAF-PBB when using the IV6-LAU as the upper mounting point.



WARNING: For safety reasons, the center of mass of the array **MUST** be located directly beneath the IV6-LAF-PBB Array Frame. If the center of mass is located behind the array frame, it may result in an unsafe rigging condition. To verify center of mass is directly beneath the Array Frame, build the intended array (using the IV6-LAF-PBB Array Frame) in EASE® Focus 3 (EF3) and verify the center of mass position meets this condition as displayed the "Rigging" pane. (See image at right from EF3).



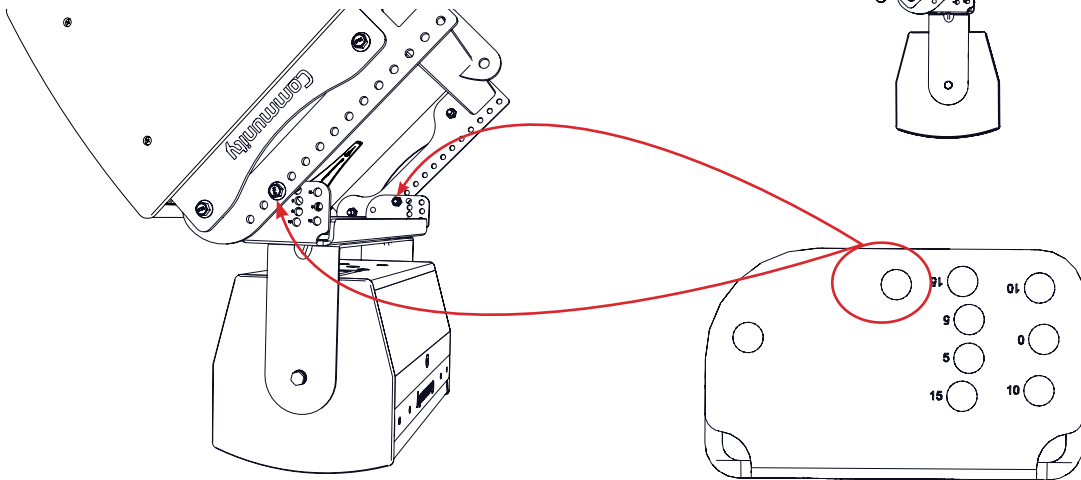
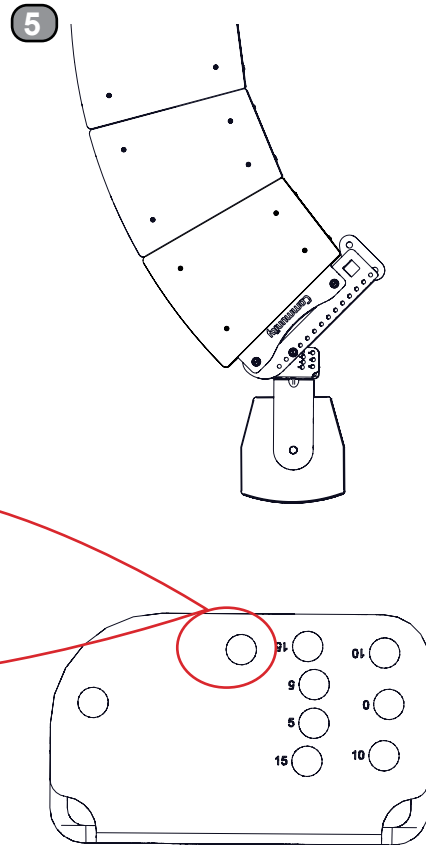
VERY IMPORTANT: The IV6-LAU can only be used with IV6-LAF-PBB pin positions 3-9 due to the frame structure. Always have rigging safety conditions verified by a certified engineer before installation. Failure to do so can lead to severe injury or even death!



IV6-LAU APPLICATIONS (CONTINUED)

5. Attach an I SERIES COMPACT (IC6) loudspeaker to the bottom of an IV6 array for downfill applications. Attach the IV6-LAU to the IV6-LAF-PBB frame as close as possible beneath the center of mass of the array. Connect the IC6 yoke to the IV6-LAU securely. Hardware to connect the IC6 yoke to the IV6-LAU must be supplied by the installer.

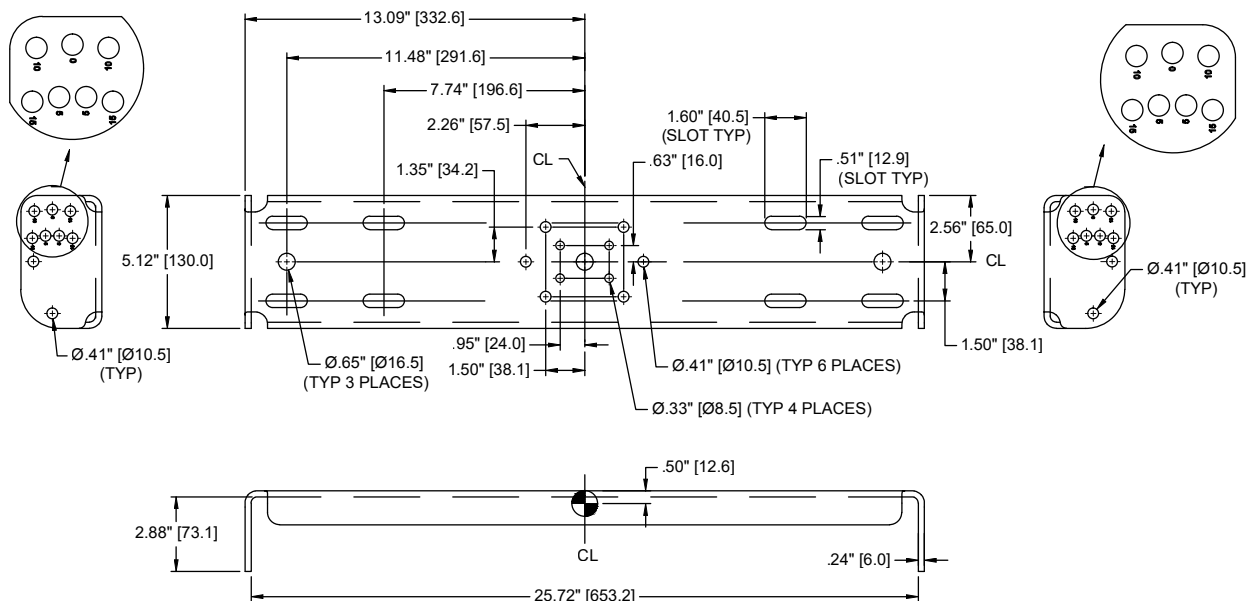
Note: Adding any elements (IV6-LAF-PBB, IV6-LAU and a loudspeaker) at the bottom of an array will change the overall weight and potentially the COG, thus changing the array hang point. Always have rigging safety conditions verified by a certified engineer before installation.



For "downfill" applications only, connect the IV6-LAU U-bracket using the center hole (circled)
One Grade 10.9 hex head bolt/hex nut connection per side
 Allow the IV6-LAU to rotate into a self-leveled position before tightening the bolts

Technical Drawing

IV6-LAU




SUB BEHIND ARRAY FRAME

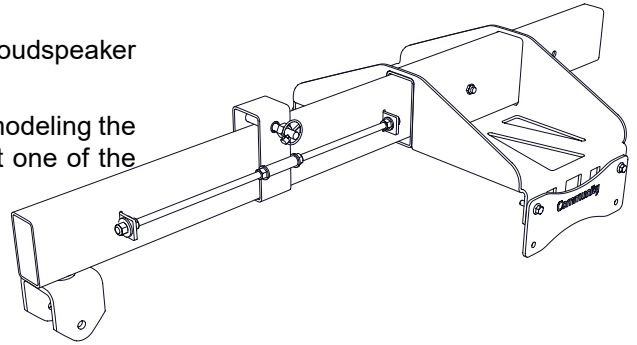
Hang up to eight (8) IV6 subwoofers behind the main indoor array.

APPLICATION: Connect to and suspend subwoofers behind a loudspeaker array.

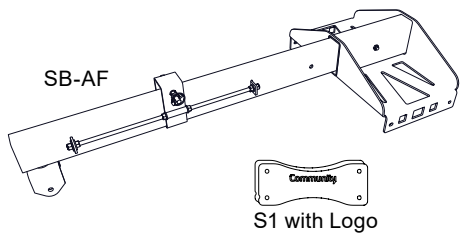
Before assembly: Determine the weight of the main array (from modeling the system in EASE® Focus 3). Connect S1 splay brackets to all but one of the subwoofers - that one will be mounted to the IV6-SB-AF.

Tips:

- The mounting frame is preinstalled at the rear position
- Using the rear position will better counterbalance the weight of a larger main array
-  **IMPORTANT:** *The IV6-SB-AF must always hang level.* Use the Sub-behind Hang Point Calculator to help determine the mounting frame position.
- When building the main array along with the sub-behind array, the main array can be rotated (up to 90°) to prevent the cabinets from potentially hitting while lifting the assembly and adding to the length of the array.



Parts:



IV6-SB-AF

SB-AF: Sub Behind Array Frame (1)

S1 w/ Logo: Splay brackets w/wordmark (2)

Hardware:

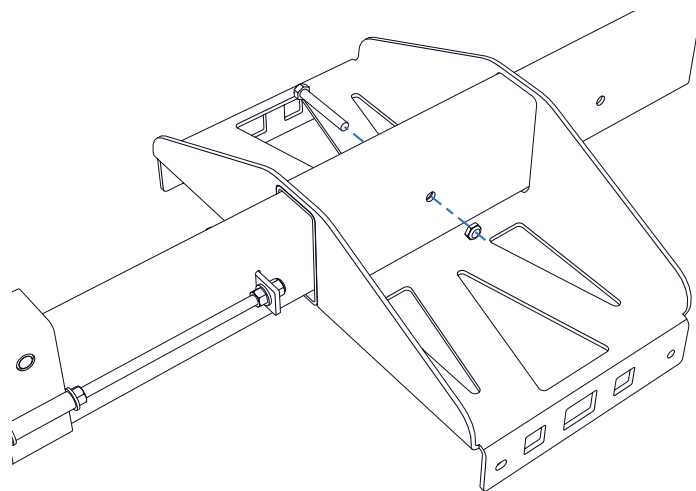
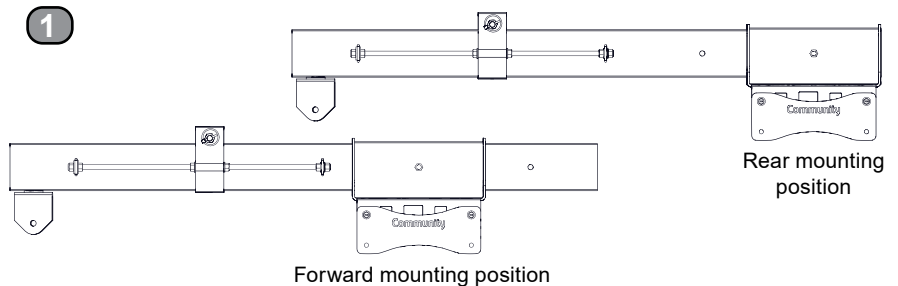
Qty	Code	Description
4	HHB-F	Grade 10.9 Flanged Hex Head Bolts
4	HN-F	Flanged Nuts
1	C-HB	Carriage Hex Bolt
1	C-HN	Carriage Hex Nut
1	LR	Locking Ring

Kit Weight: 108.0 lbs (49.0 kg)

Working Load Limit: 2000 lbs (907.2 kg)
(10:1 safety factor)

ASSEMBLY

1. Move the sub mounting frame to the forward position if only 1-2 subwoofers are being mounted.



SB-1. Determine sub mounting position
(Reposition frame, forward if needed, using installed bolt/nut)

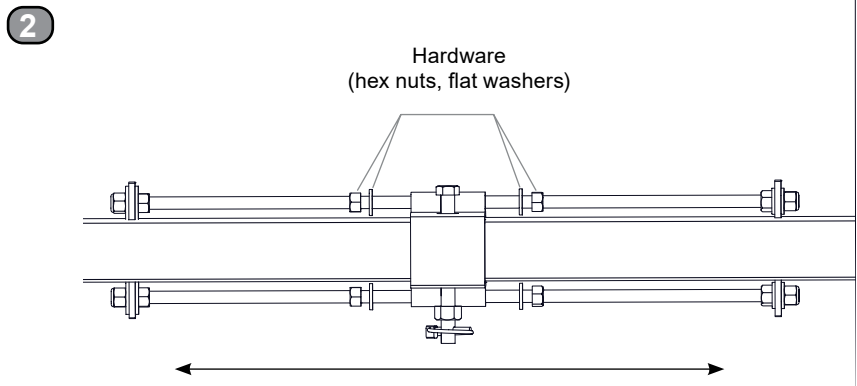
Additional rigging accessories are available from Polar Focus - See table on [Page 18](#) of this manual.

SUB BEHIND ARRAY FRAME (CONTINUED)

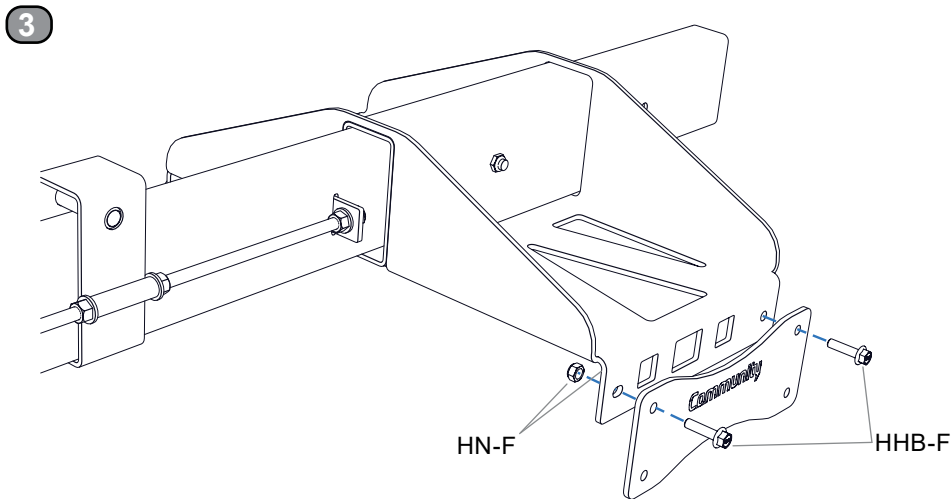
ASSEMBLY (CONTINUED)

2. Move the carriage to the suggested hang point distance so that the frame will hang level under load. *Refer to the Sub-behind Hang Point Calculator. (IV6 Downloads)* The hang point distance is measured from the front of the frame to the lift hole in the carriage.

3. Using the Grade 10.9 flanged bolts and nuts, loosely attach the S1 brackets to the array frame with the Community name facing out.



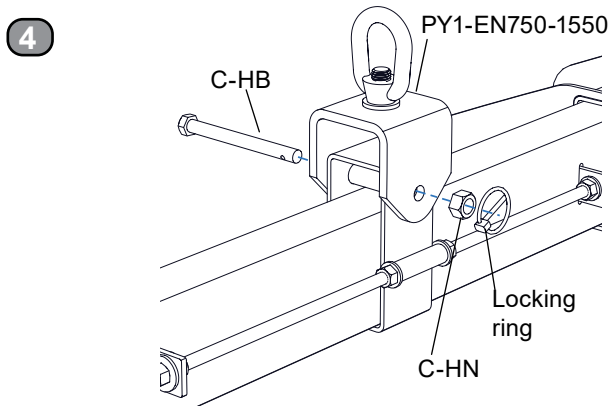
SB-2. Loosen nuts in the direction the carriage has to go, move carriage to designated position, and tighten hardware



SB-3. Loosely connect the splay brackets to the array frame

4. If using the PY1-EN750-1550 lift point, attach it to the carriage with the included carriage hex bolt and secure with the hex nut and locking ring.

Final Step. After the carriage is in its final position (and the system is aimed), **one at a time**, loosen each hex nut securing the carriage a few threads, apply a drop of red thread-locking compound, and re-tighten the nut. Repeat for each of the 4 hex nuts securing the carriage on the threaded rods. This will help prevent movement of the carriage over time.

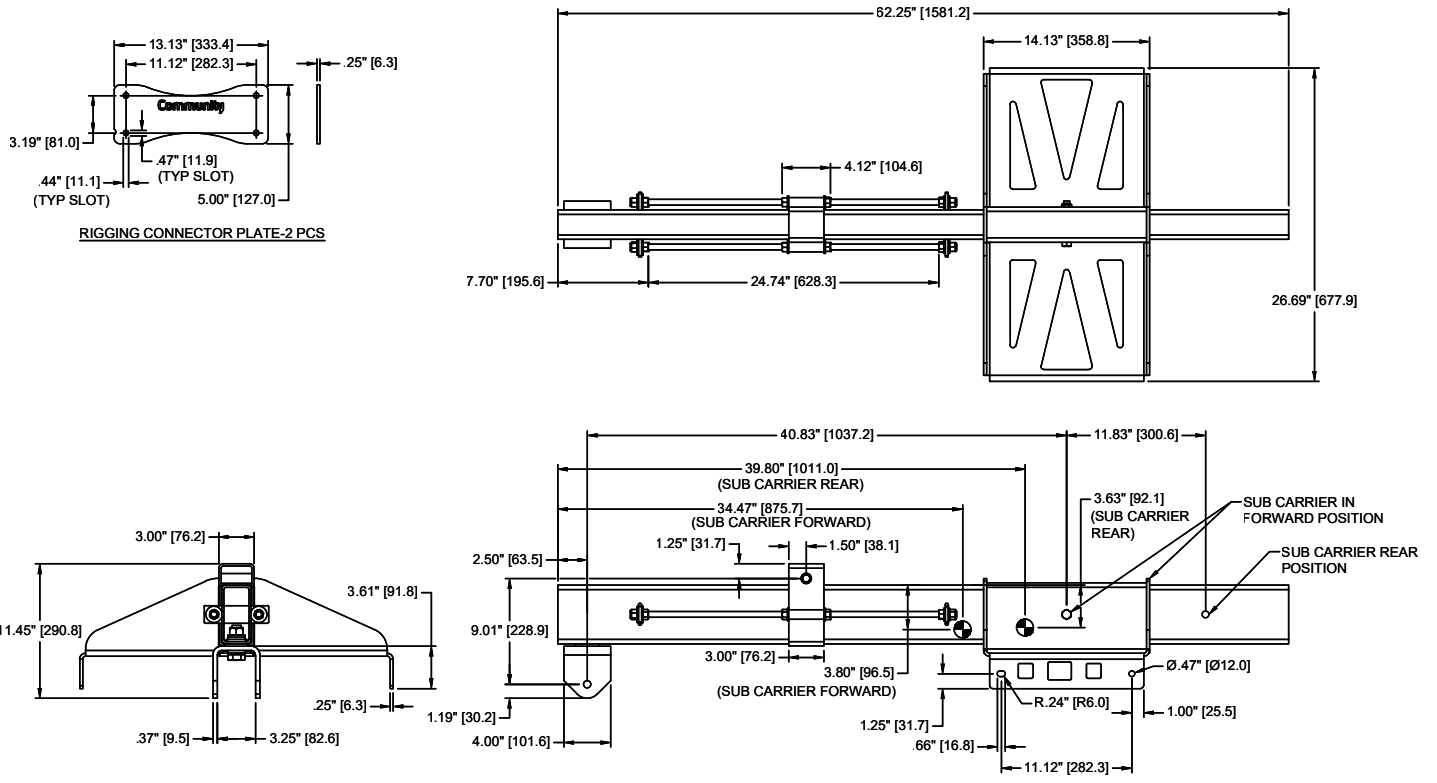


SB-4. Attach Lift Point to carriage hang point

SUB BEHIND ARRAY FRAME (CONTINUED)

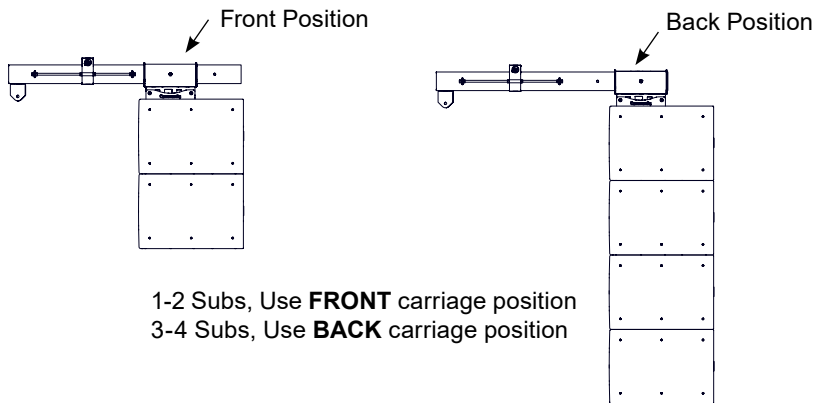
Technical Drawing

IV6-SB-AF



SUB BEHIND HANG POINT CALCULATOR

Biamp provides an easy calculation tool to determine where the hang point should be located based upon the full weight of the main array when attached to the Sub Behind Array frame so that the SB-AF stays level. This tool calculates the distance for 1-4 subwoofers. The tool is included in the "IV6 Manuals and Tools (All)" zip file, and is available [here](#) in the manuals section of the IV6 product page on the Biamp website.



VenuePolar Rigging

Start Array Loads

Single Hang at Pinpoint 36 (Offset = 0.11')

Pinpoint: 36

Desired Safety Factor: 10 : 1

	Name	Front Load	Back Load	Safety Factor
0:	IV6-GP-AF	522.93 lb		24:1
1:	IV6-1122/15	72.17 lb	293.69 lb	27:1
2:	IV6-1122/15	98.58 lb	283.57 lb	28:1
3:	IV6-1122/15	93.71 lb	234.76 lb	34:1
4:	IV6-1122/15	68.53 lb	166.08 lb	48:1
5:	IV6-1122/15	39.39 lb	94.26 lb	84:1
6:	IV6-1122/15	15.36 lb	34.85 lb	229:1

Show only lowest safety factor

1. Retrieve the weight of the main array from Line 0 of the "Loads" tab in EASE® Focus 3 (EF3), or from the Loads section of the EF3 project report for that array. Enter that value into the cell, and select lbs or kg.
2. Choose the sub configuration from the drop down list.
3. Record the carriage location and hang point distance (inches or cm) for use during installation.

Sub Behind Hang Point Calculator	
FR Array	522.93 lbs
Sub Config	2 Subs, Front
Hang Point dist.	50.3 cm
Safety Factor	25.4 :1

Hang Point Distance

WARNING: The Sub-Behind Hang Point Calculator should not be used with arrays that include a Pull Back bar (IV6-LAF-PBB) at the bottom of the array. The calculator will not produce accurate results when a pull back bar is in use.

NOTE: If you require assistance designing an IV6 Array, please contact our Loudspeaker Applications Group: communitysupport@biamp.com

Figure SB-5. Sub Behind Hang Point Calculator

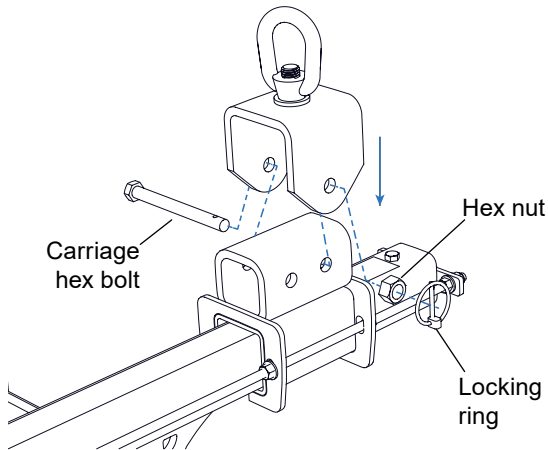
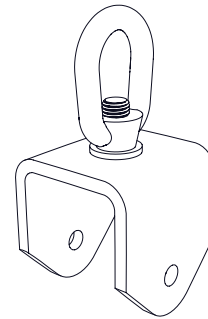
LIFT POINT FOR ARRAY FRAMES

Determine the lift point, and attach to the carriage on either the IV6-GP-AF or IV6-SB-AF with the carriage hex bolt, nut and locking ring included with the array frame. Assembly illustrations (shown below) are also in IV6-GP-AF and IV6-SB-AF assembly instructions.

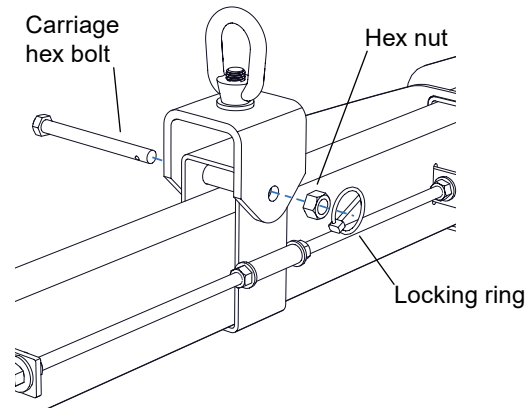
PY1-EN750-1550

Kit Weight: 6 lbs (2.7kg)

Working Load Limit: 1550 lbs (703.1 kg)
(10:1 safety factor)



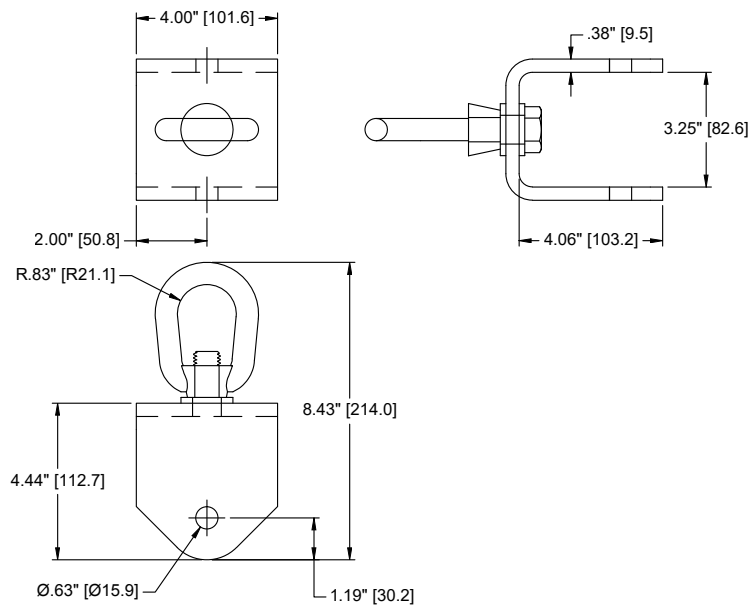
PY1 to GP-AF. Attach to the lift point specified by the pin# position on IV6-GP-AF label.



PY1 to SB-AF. Attach to the lift point on carriage of IV6-SB-AF.

Technical Drawing

PY1-EN750-1550



ACCESSORY BRACKET REFERENCE

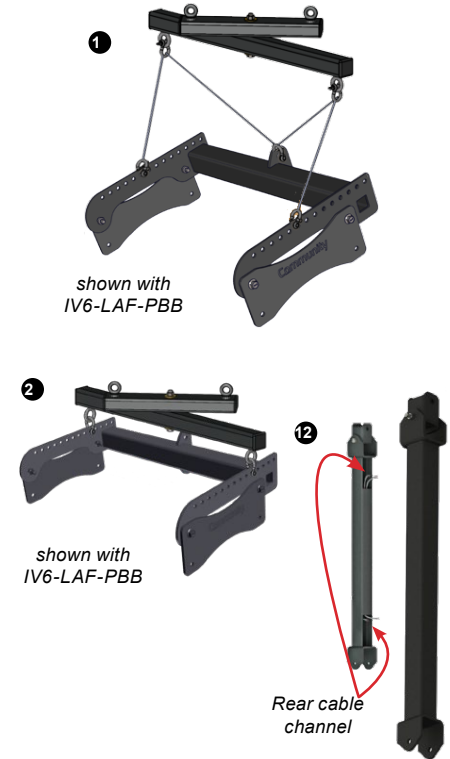
Available from Polar Focus

Polar Focus offers additional brackets for other mounting applications.

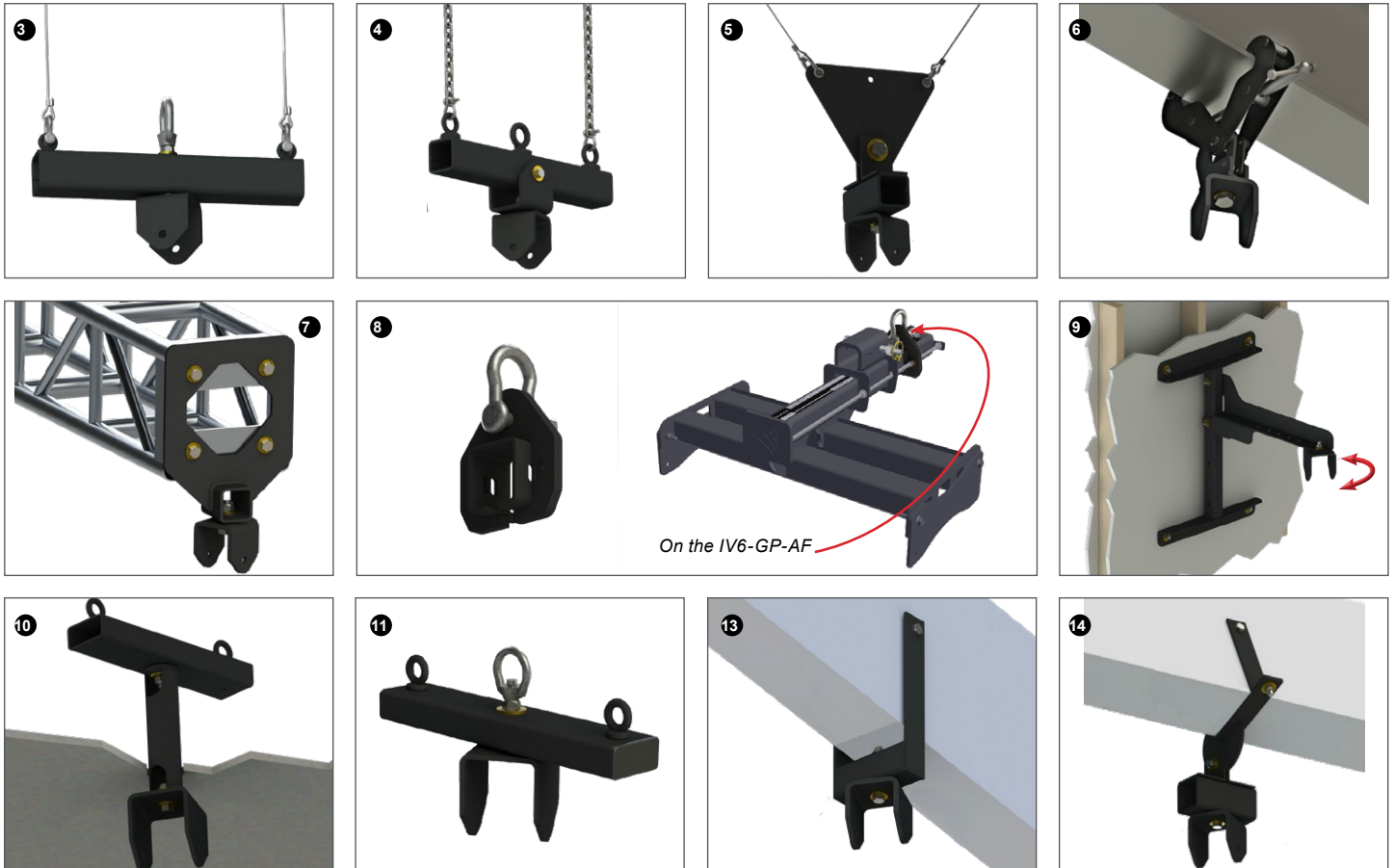
Below is a quick reference table to choose from. The model numbers are also hyperlinks to the associated pages on PolarFocus's website noted below.

Contact Polar Focus (linearrayframes.com) for additional information.

OFF THE SHELF		
1	IV6-ZB-TCK	Z-Beam and Tilt Cable Kit (for use with IV6-LAF-PBB)
2	IV6-ZB-DHB	Z-Beam "Dead Hang" Bracket (for use with IV6-LAF-PBB)
3	PY1-ZBH-1550	Two Point Permanent Install Mount with Center Service Pick Point
4	PY1-ZBR-1550	Self-Leveling Dual Hoist Mount
5	PY1-SLH	Self-Leveling Two Point Bridle Mount (1200lbs. WLL)
6	PY1-RBC-1-1100	Level, Steel I-Beam Mount
7	PY1-BTP1212-1550	12" x 12" Box Truss Plate Mount
8	RLP-X2-1800	Redundant Load Point
9	PY0-WMV-2226-250	Wall Mount (250lbs. WLL)
10	PY0-STEM	Hidden Two Point Permanent Install Through-Ceiling Mount (300lbs. WLL)
11	PY0-ZBH-300	Two Point Permanent Install Mount with Center Service Pick Point (300lbs. WLL)
SEMI-CUSTOM		
<i>User-defined dimensions required</i>		
12	PY1-UJEXT-POST	Custom Length Ceiling Extension Post (available from 2ft. to 16ft.)
13	PY1-CBA-3	Custom Sized Mount for Level or Sloped Wood-Based Beams (500lbs. WLL)
14	PY1-CBA-4	Custom Sized Mount for Rolled Wood-Based Beams (450lbs. WLL)



All PY0/PY1 brackets shown are infinitely adjustable, and will connect to the carriage hang points on the IV6-GP-AF and IV6-SB-AF.



Rigging images courtesy of Polar Focus

WEIGHTS

<i>LOUDSPEAKERS (includes 1 pair splay brackets)</i>	<i>Indoor [lbs (kg)]</i>	<i>Outdoor / WR [lbs (kg)]</i>
IV6-1122/05	77.3 (35.1)	62.5 (28.3)
IV6-1122/15	73.5 (33.3)	59.1 (26.8)
IV6-118S	132.9 (60.3)	99.3 (45.0)
<i>ACCESSORIES (available from Community)</i>	<i>Weight Indoor [lbs (kg)]</i>	<i>Working Load Limit [lbs (kg)]</i>
IV6-GP-AF	76 lbs (34.5kg)	1300 lbs (589.7 kg)
IV6-LAF-PBB	23 lbs (10.4kg)	850 lbs (385.6 kg)
IV6-SB-AF	108.0 (49.0)	2000 lbs (907.2 kg)
IV6-LAU	13.5 lbs (6.1 kg)	500 lbs (226.8 kg)
PY1-EN750-1550	6 lbs (2.7 kg)	1550 lbs (703.1 kg)

TYPICAL PRODUCT LABELS

IV6-GP-AF

IV6 GLIDEPOINT ARRAY FRAME



! **Before installation**, read manual and comply with all safety instructions. Follow splay bracket configuration and load conditions as indicated by modeling software.

CAUTION: The array must be installed by qualified professionals in accordance with all applicable regulations, and the configuration must be approved by a licensed structural engineer.




Community Light & Sound, Inc.
Chester, PA 19013 USA
www.communitypro.com

Lot #:

IV6-GP-AF

IV6-GP-AFW

WLL: 1300 lbs (589.7 kg)

Working Load Limit
@10:1 Design Factor

Typical product identification, warning and WLL labels on accessories (IV6-GP-AF SHOWN)

CONTACT US

Email: support@biamp.com or CommunitySupport@biamp.com

Web: support.biamp.com

Warranty: biamp.com/legal/warranty-information

Note: Every effort has been made to insure that the information contained in this manual was complete and accurate when printed. However, due to ongoing technical advances, changes or modifications may have occurred that are not covered in this manual. The latest version is available at support.biamp.com.