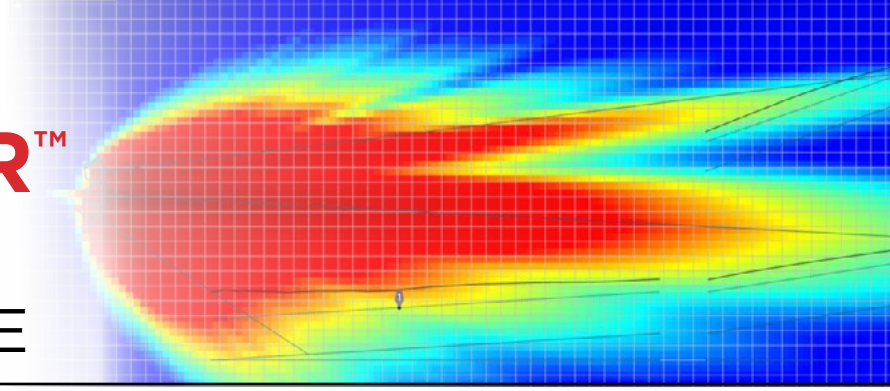
biamp.

VENUEPOLAR™ LVH-900

REFERENCE GUIDE

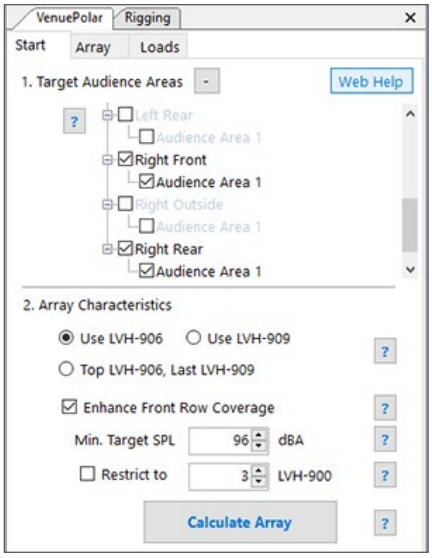


Simplified Design for Community LVH-900

VenuePolar™ is a custom plugin for EASE® Focus 3, that extends ease of design to LVH-900 loudspeaker installations, allowing system designers to create larger custom arrays while streamlining the design process. The plugin is included within the LVH GLL (v2.0 or later). Download the latest LVH GLL.

The designer simply enters the acoustic goals they need to achieve for their audience. VenuePolar then quickly calculates the number and type of speakers (AS or AP), frame angle, vertical coverage patterns and splay angles to provide the most uniform coverage within the seating area. Integration with FIRmaker filter optimization makes it easy for LVH-900 to outperform other large format point source loudspeakers or line arrays in any application.

START TAB: Define your desired system performance



Choose Target Audience Areas

- All audience zones and areas are listed
- Those that do not intersect with speaker aiming line are grayed out
- Right-click to check or uncheck all

Select Array Characteristics

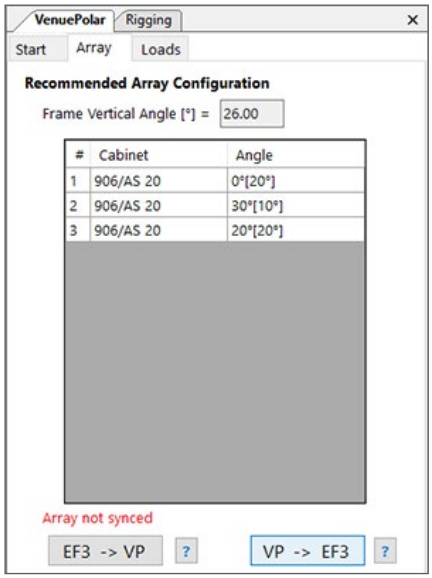
- Hover mouse over the blue question marks for a quick tool-tip
- Click ‘Web Help’ for more details

Click ‘Calculate Array’

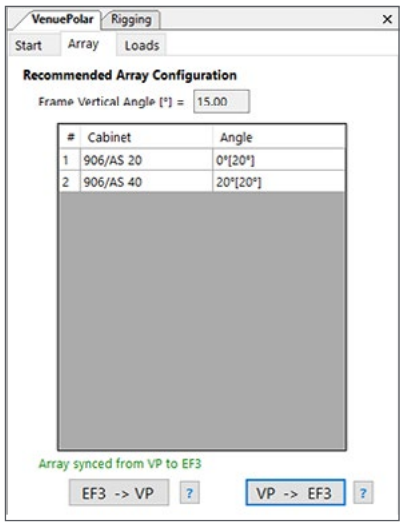
- Perform calculations of number and types of speakers (AS or AP), frame angle, vertical coverage patterns and splay angles. Select “Restrict to X # of LVH-900” if working within a specific budget.

ARRAY TAB: Shows the Recommended Array Configuration

After the Array is calculated the configuration will appear as a "Recommended Array Configuration." You will see a red "Array not synced" message.



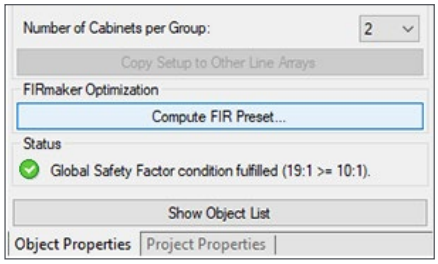
A simple press of the VP to EF3 button will automatically send that array configuration to the EASE Focus 3 object properties panel. You will see a green message confirming the match. The change will also be seen in the rest of the EASE Focus 3 panels.



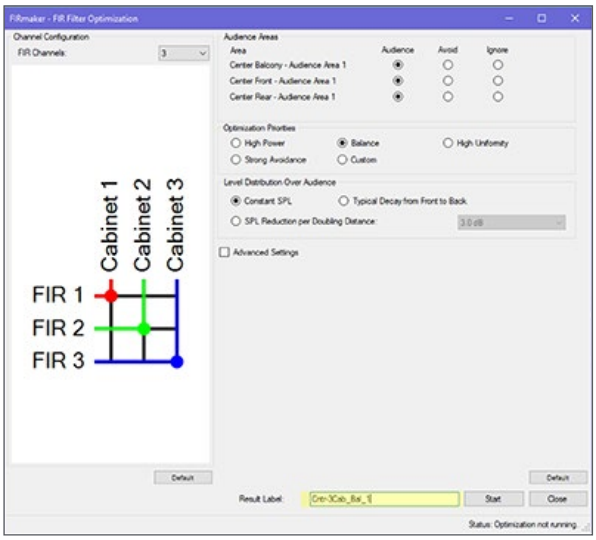
LVH FIRMAKER OPTIMIZATION

With the latest GLL, the designer can use AFMG®'s FIRmaker engine to fine tune the LVH array to better fit the coverage to the venue and reduce interference between the cabinet patterns.

Once you have an array configuration that you are happy with you can refine it by using FIRmaker optimization. With the array selected, press the Compute FIR Preset button at the bottom of the Object Properties panel.



A new window will pop up and give you options to optimize the array. Name the optimization so you can refer back to it. The default settings are below.



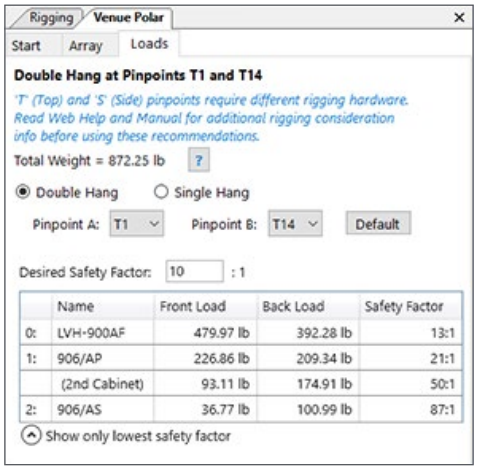
EASE Focus 3 will export separate files for each cabinet in the array.

IMPORTANT: You must have a LVH-900 FIRmaker license to be able to export the FIR files. If you don't have a FIRmaker license you can contact VenuePolar@biamp.com to request one.

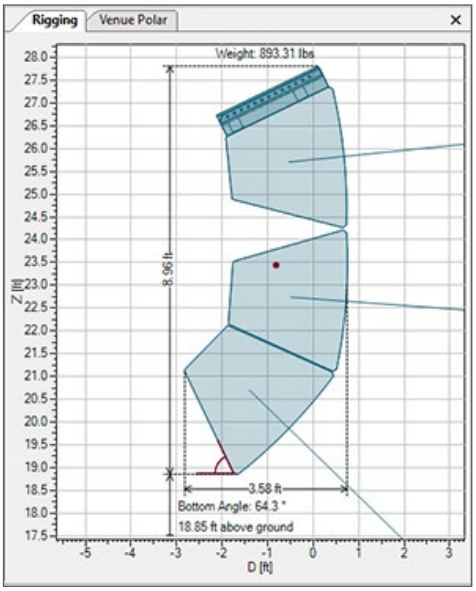
LOADS TAB: The Rigging Calculator tool calculates cable and fastener forces as a function of the array orientation and cable position.

Single or Double Hang

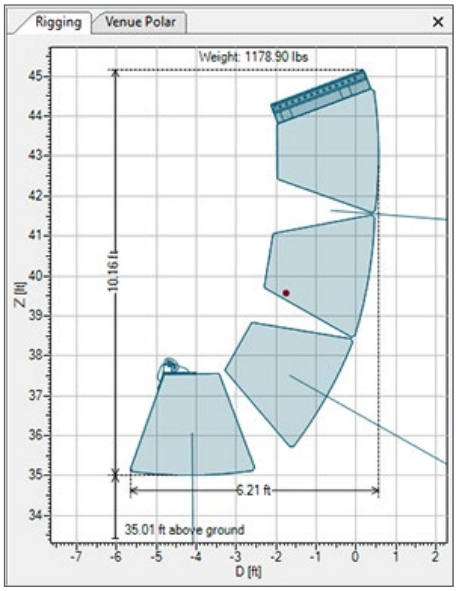
A Double Hang configuration is the default result shown on the Loads tab with pinpoints chosen to best suspend the array (over the Center of Gravity). If there is a pull back on the array, only a Single Hang option will be shown. With the Single Hang option, the rigging calculator returns the closest valid pinpoint in front of the Center of Gravity (CoG).



The rigging tab shows a side view of the array, a representation of the CoG of the array (red dot) and basic dimensions of the array.

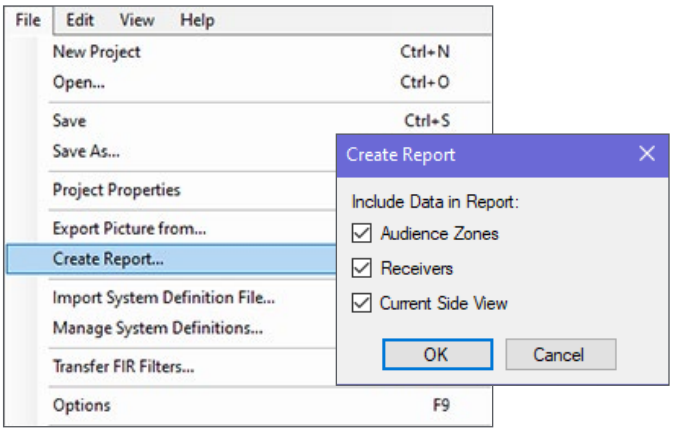


If you add a pull back bar to the bottom of the array it will be shown correctly in the Rigging tab, and also be reflected on the Loads tab and in the project report.



AFTER YOU'RE DONE, CREATE A REPORT

- Select the visual elements you would like to include
- Save the PDF report to your computer
- Generate reports with differing level of detail



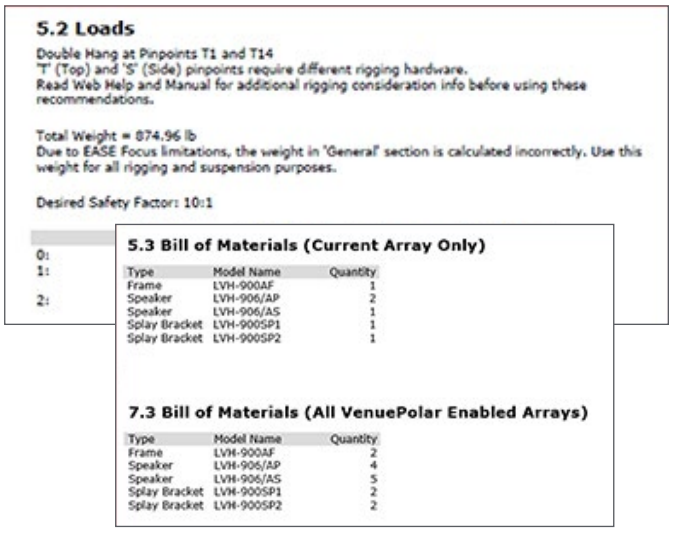
The report includes information about the venue, the arrays, and their characteristics including:

- Project information and definitions for each of the audience zones, shape, ear height, etc.
- Sound sources, distribution, and global filters for each array
- Description of the cabinets, splay brackets, rigging frames (types and number)
- Passive filter settings (for the installer to set the jumpers on the attenuation panels)
- Loads, pinpoints, array weights, safety calculations and any associated warnings
- A bill of materials for each array in the project. Use of side pinpoints will cause a PY1-1550 to be added to the bill of materials for every side pinpoint utilized in the array.
- A combined bill of materials for all arrays that were configured with VenuePolar (includes IV6)

The Loads portion of each array's section will show the hanging option (single/double), the pinpoint, the total array weight and if there is a pull back bar.

Each sound source will list a Bill of Materials (BoM) for that array and then a summary BoM will be located after the last sound source that will list all elements of all VenuePolar enabled arrays (for easy ordering purposes).

Note: The LVH-900 GLLs with VenuePolar must be used in EASE Focus 3 v 3.1.14 or later.



5.2 Loads

Double Hang at Pinpoints T1 and T14
'T' (Top) and 'S' (Side) pinpoints require different rigging hardware.
Read Web Help and Manual for additional rigging consideration info before using these recommendations.

Total Weight = 874.96 lb
Due to EASE Focus limitations, the weight in 'General' section is calculated incorrectly. Use this weight for all rigging and suspension purposes.

Desired Safety Factor: 10:1

0:
1:
2:

5.3 Bill of Materials (Current Array Only)

Type	Model Name	Quantity
Frame	LVH-900AF	1
Speaker	LVH-906/AP	2
Speaker	LVH-906/AS	1
Splay Bracket	LVH-900SP1	1
Splay Bracket	LVH-900SP2	1

7.3 Bill of Materials (All VenuePolar Enabled Arrays)

Type	Model Name	Quantity
Frame	LVH-900AF	2
Speaker	LVH-906/AP	4
Speaker	LVH-906/AS	5
Splay Bracket	LVH-900SP1	2
Splay Bracket	LVH-900SP2	2