

VENUEPOLAR™

REFERENCE GUIDE



Simplified Design for the Community IV6 Array

VenuePolar™ is a custom plugin for [EASE® Focus 3](#), developed to streamline the IV6 system design and configuration process. The plugin is included within the IV6 GLL (v3.20 or later). Download the latest [IV6 GLL](#).

The designer simply enters the acoustic goals they need to achieve for their audience, VenuePolar then quickly calculates the number, cabinet type (5°/15°), frame angle, splay angle, and how to set the optimal Passive Acoustic Optimization (PAO) settings for each cabinet to provide the most uniform response possible through the seating area. Additionally, VenuePolar will suggest an appropriate number of IV6 subwoofers to pair with the array for a balanced, extended low frequency response.



START TAB: Define your desired system performance

Choose Target Audience Areas

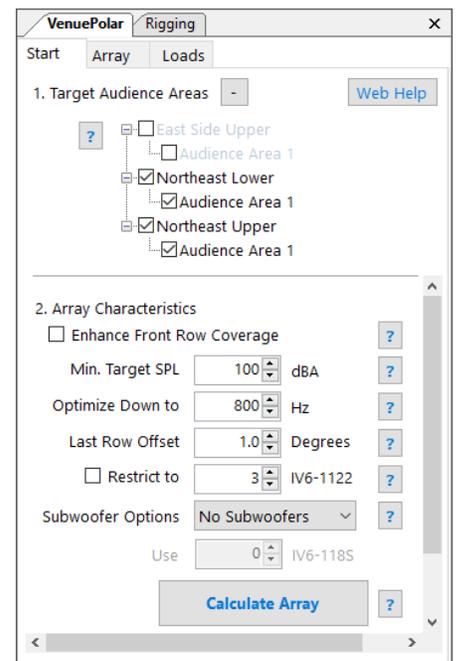
- All audience zones and areas are listed
- Those that do not intersect with speaker aiming line are grayed out
- Right-click to check or uncheck all

Select Array Characteristics

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

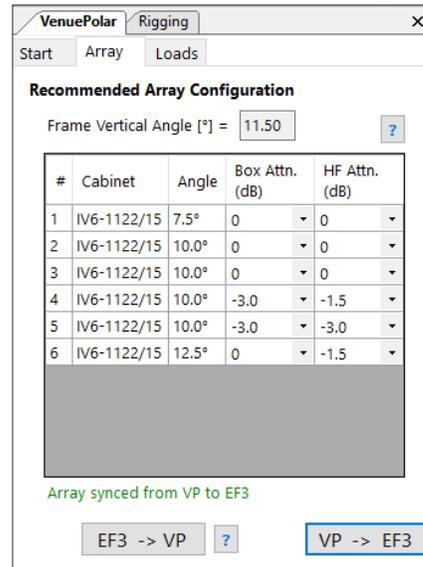
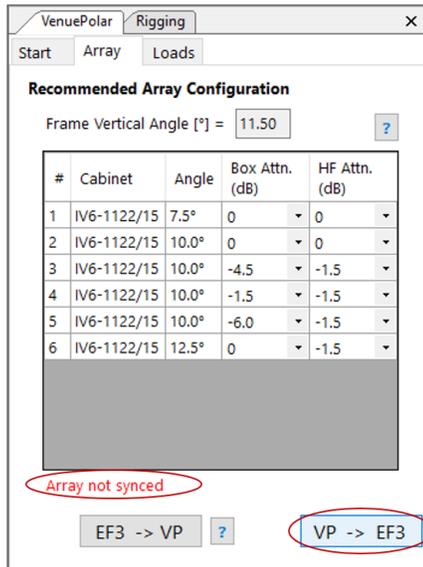
Click 'Calculate Array'

- Perform optimization for frame angle, speaker quantity, models, splay angles, and passive filters



ARRAY TAB: Shows the recommended array

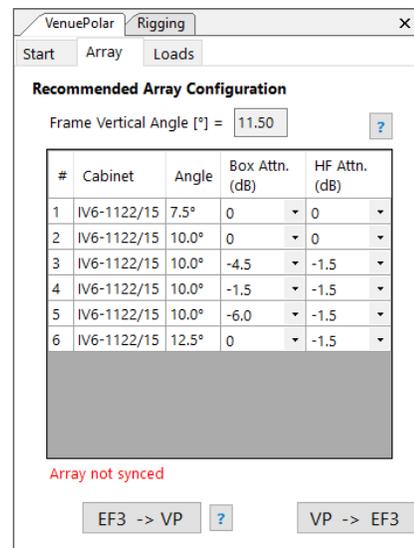
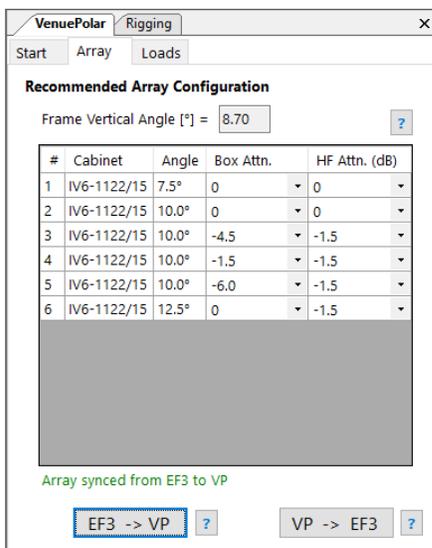
The Array Tab will show the recommended arrays settings. Initially, below the settings is the message “Array not synced”. To send the suggested settings from VenuePolar (VP) to the Array in EASE Focus 3 (EF3), press the “VP -> EF3” button. It will automatically transfer all information about the array from the VenuePolar plugin to the IV6 Array in EF3, including number of cabinets, types of cabinets, splay angles between cabinet, array aiming angle and all PAO settings. Once the settings are transferred, the message will change to “Array synced from VP to EF3”.



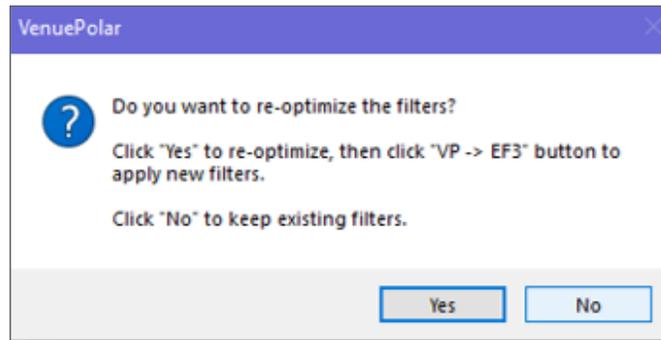
FOR ADVANCED USERS

It is easy to fine tune the performance of an IV6 array by manually adjusting individual cabinet PAO settings within the VenuePolar plugin and easily sync changes to EF3 by pressing the “VP -> EF3” button. Once synced, EF3 will automatically update the coverage maps and response graphs.

Additionally, advanced users can now also make adjustments to the physical IV6 array from within the standard EF3 Object Properties pane and re-optimize the filters when sending the new settings to the VenuePolar plugin.

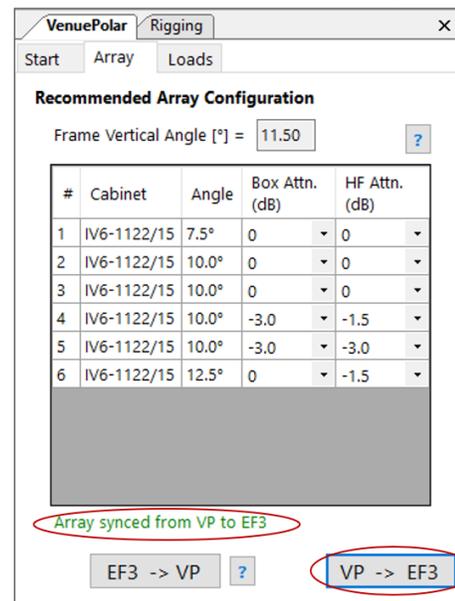
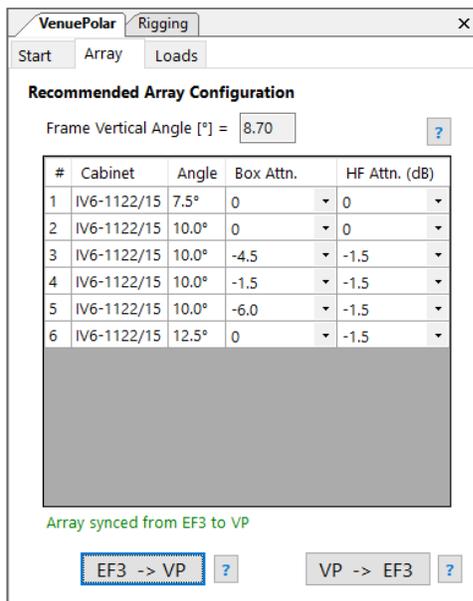


Make changes manually within EF3, then press the “EF3 -> VP” button, a message will pop up asking if you want to re-optimize the PAO filters for the array before it is imported into VenuePolar.



If you select “No”, the array will be imported without any additional changes. The sync message will indicate “Array synced from EF3 to VP” to indicate that the array was imported manually and that no changes have been made by VenuePolar to the PAO settings.

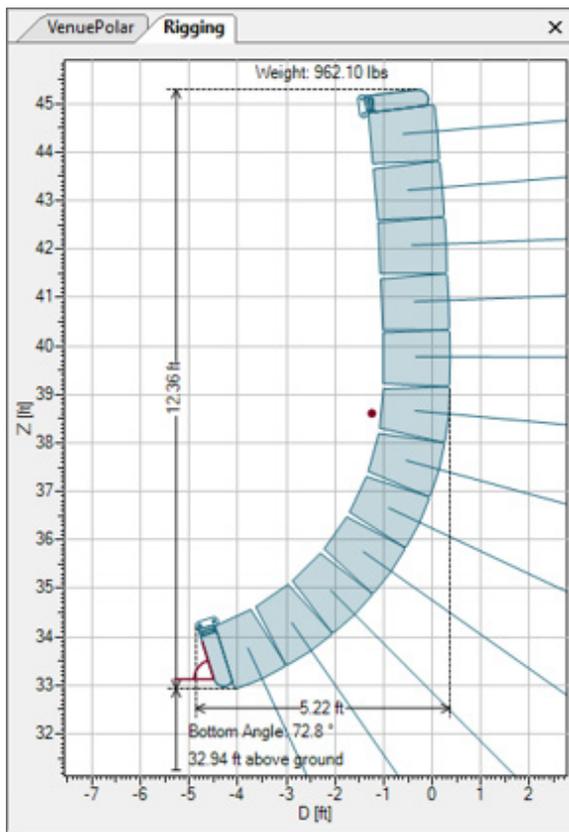
If you select “Yes”, new PAO filter settings will be calculated for the imported array. To send the newly calculated PAO settings back to the IV6 Array in EF3, you must press the “VP -> EF3” button once again. The sync message will change to “Array synced from VP to EF3”.



LOADS TAB: Indicates if an array is too large

The “Rigging Safety Calculator” (RiSC) plugin is found under the “Loads” tab in the VenuePolar plugin. As a designer creates an IV6 array in EF3, the RiSC function automatically populates and updates the predicted safety factor of the loads found between each element in the array. If the safety factor at any point in the array is lower than the “Desired Safety Factor”, a secondary warning will appear in EF3 status bar notifying the user that changes may be needed.

New capabilities have been added to the Rigging Safety Calculator found under the Loads tab. The pull back bar now allows designers to safely build bigger arrays in excess of up to 20 cabinets in virtually any configuration. Select the pinpoint for a Single Hang or a Double Hang within the VenuePolar plugin.

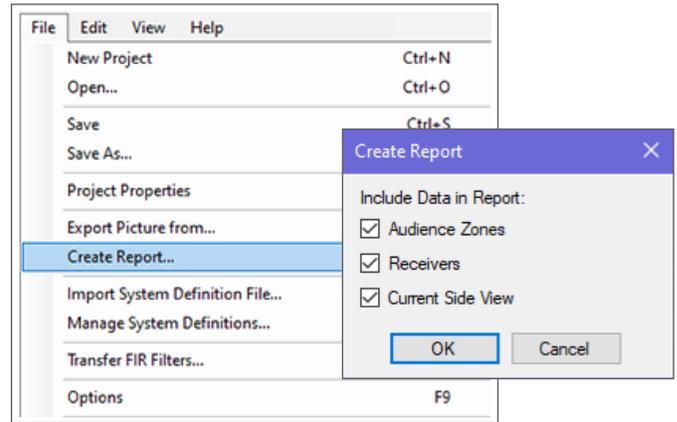


Name	Front Load	Back Load	Safety Facto
0: IV6-LAF-PBB	800.59 lb		10:1
1: IV6-1122/05	200.23 lb	189.59 lb	39:1
2: IV6-1122/05	139.11 lb	211.32 lb	37:1
3: IV6-1122/05	84.92 lb	226.15 lb	35:1
4: IV6-1122/05	49.11 lb	222.50 lb	35:1
5: IV6-1122/05	17.10 lb	215.10 lb	37:1
6: IV6-1122/15	5.46 lb	195.44 lb	40:1
7: IV6-1122/15	20.35 lb	163.33 lb	48:1
8: IV6-1122/15	23.37 lb	106.25 lb	75:1
9: IV6-1122/15	38.03 lb	42.54 lb	188:1
10: IV6-1122/15	56.37 lb	27.09 lb	141:1
11: IV6-1122/15	62.81 lb	59.38 lb	127:1
12: IV6-1122/15	48.21 lb	62.24 lb	128:1
13: Pull Back		161.49 lb	52:1



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
 - Colorful, detailed report for purchasers and decision makers
 - Simplified text report for system installers and engineers



Project Information

- Include information about the project
- Insert custom notes for the recipient
- Include visuals to demonstrate the uniform coverage of the IV6 arrays
 - Overhead and / or side views

Reports Include

- Position & aiming information for all arrays in the project
- SPL level distribution across all audience areas in the project
- PAO filters required to achieve the results shown

Assists with ordering the correct parts

- Number of cabinets
- Type of cabinets
- Splay brackets
 - Note that the splay bracket SKU type is included
 - IV6 use 3 different splay bracket types; IV6-S1, IV6-S2, and IV6-S3
 - And suspension array frame

A new and improved bill of materials in the report section provides a more streamlined summary of the quantities and types of loudspeakers, splay brackets and other accessories required in each array to simplify the ordering process.

The report also includes a total bill of materials for the project that can be found at the last sound source.

7.4 Bill of Materials (Current Array Only)

Type	Model Name	Quantity
Frame	IV6-GP-AF	1
Lift Point	PY1-EN750-1550	1
Speaker	IV6-1122/15	6
Splay Bracket	IV6-S2	1
Splay Bracket	IV6-S3	1

7.5 Bill of Materials (All VenuePolar Enabled Arrays)

Type	Model Name	Quantity
Frame	IV6-GP-AF	2
Frame	IV6-LAF-PBB	2
Lift Point	PY1-EN750-1550	2
Speaker	IV6-1122/05	10
Speaker	IV6-1122/15	16
Splay Bracket	IV6-S1	4
Splay Bracket	IV6-S2	2
Splay Bracket	IV6-S3	17

Aids in commissioning the system onsite:

- Indicates physical position of PAO cabinet settings
 - Note that “Box Attenuation” calls out the physical positions for the jumpers on each loudspeaker (C0, B1, B2, etc.)
- Provides rigging loads report for onsite engineering
- Provides aiming details for the entire array

Note: The IV6 GLLs with VenuePolar must be used in EASE® Focus3 v 3.1.14 or later.

Filter Status: Active
Gain: 0.0 dB
Delay: 0.000 ms
Polarity: Normal

No Active Filters	Filter Type	Frequency	Gain / Slope	Q Factor
Status				
Type	Message			
Confirmation	Global Safety Factor condition fulfilled (19:1 >= 10:1).			

5.2 Passive Filter Settings

Box	Box Type	HF Attn.	Box Attn.
Box 1	IV6-118S	0.0 dB	0.0 dB (C0)
Box 2	IV6-1122/05	0.0 dB	0.0 dB (C0)
Box 3	IV6-1122/05	0.0 dB	0.0 dB (C0)
Box 4	IV6-1122/05	0.0 dB	0.0 dB (C0)
Box 5	IV6-1122/05	0.0 dB	0.0 dB (C0)
Box 6	IV6-1122/05	0.0 dB	0.0 dB (C0)
Box 7	IV6-1122/05	-1.5 dB	0.0 dB (C0)
Box 8	IV6-1122/15	-3.0 dB	0.0 dB (C0)
Box 9	IV6-1122/15	0.0 dB	-3.0 dB (B1)
Box 10	IV6-1122/15	-4.5 dB	-3.0 dB (B1)
Box 11	IV6-1122/15	-4.5 dB	-6.0 dB (B2)
Box 12	IV6-1122/15	-4.5 dB	-3.0 dB (B1)

5.3 Loads

Desired Safety Factor: 10:1

Frame	Box Type	Front Load	Back Load	Safety Factor
Frame	IV6-GP-AF	1037.19 lb		
Box 1	IV6-118S	339.48 lb	145.13 lb	23:1
Box 2	IV6-1122/05	150.10 lb	264.79 lb	30:1
Box 3	IV6-1122/05	43.71 lb	337.82 lb	23:1
Box 4	IV6-1122/05	50.01 lb	383.12 lb	20:1
Box 5	IV6-1122/05	106.44 lb	404.31 lb	19:1
Box 6	IV6-1122/05	145.44 lb	405.44 lb	19:1
Box 7	IV6-1122/05	158.14 lb	378.75 lb	21:1
Box 8	IV6-1122/15	151.57 lb	331.66 lb	24:1
Box 9	IV6-1122/15	132.25 lb	263.69 lb	30:1
Box 10	IV6-1122/15	91.52 lb	179.28 lb	44:1
Box 11	IV6-1122/15	49.66 lb	98.14 lb	81:1
Box 12	IV6-1122/15	18.08 lb	34.84 lb	229:1