

### **Design Objective**

Utilize existing drivers in JBL [JBL 4699B](#) in the absolutely smallest form factor

### **Working Concept**

Dipole speakers have a very small form factor.

Utilize 18" E155 in a dipole cabinet at the bottom

Utilize 1" 2425h in a down firing omnidirectional configuration and up firing 10" E110 in a configuration similar to the [Bella Luna Diamante](#)

Imagine these two images in one structure (or similar style stacked structures)



2425h 1" down-firing tweeter

E110 10" up-firing midrange



18" JBL E155

Could also be single dual driver sub and two 2425/E110 satellites...imagine...



**JBL E155 - into Ripole cabinet**



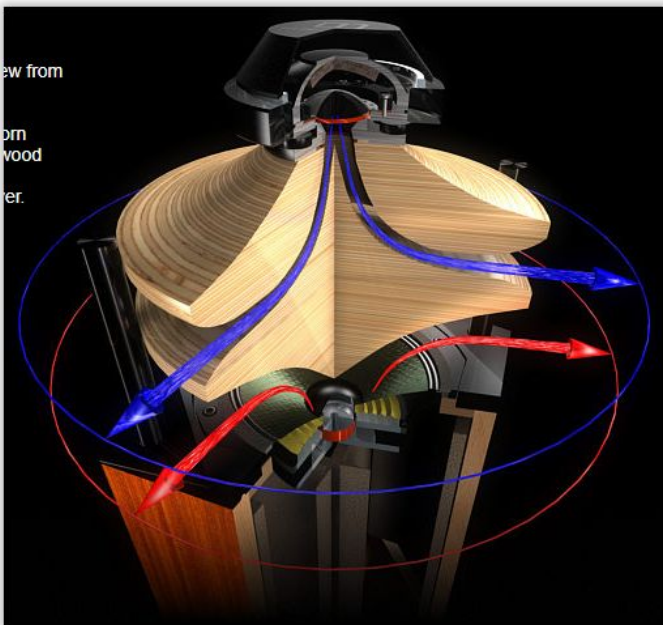
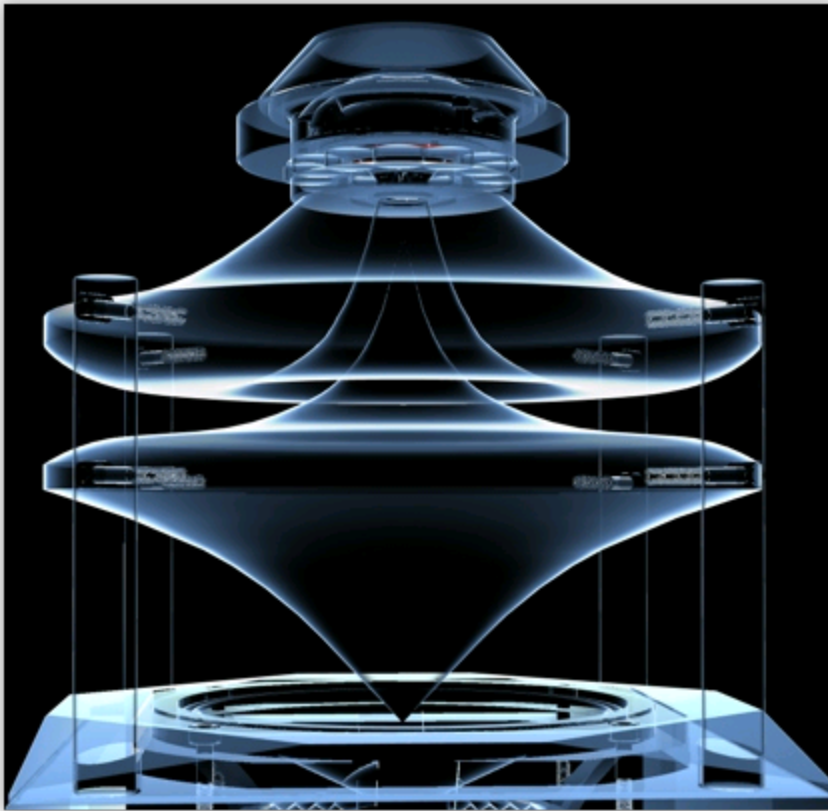


## **JBL E155-8 Thiele Small Parameters**

### [JBL E155 Spec](#)

Fs	30Hz	Resonance frequency of driver in free-air hertz
Qts	0.2	Total Q of driver at "fs" including all driver loss mechanisms
	dimensionless	
Eff	4.9%	Reference efficiency no (half-space acoustic load) %
VAS	424.8	Volume of air having same acoustic compliance as driver suspension
		cubic feet
Qes	0.22	Q of driver as "fs" considering electromagnetic damping only
		Dimensionless
2.2	Qms	Q of driver as "fs" considering mechanical loss mechanisms only
		Dimensionless (non-elctromagnetic)
LE	1.4mH	Le Voice coil inductance mH
Pe	300w	(Max) Thermally-limited maximum electrical input power watts
Xmax	5.08mm	Peak linear displacement of driver diaphragm millimeters
SD	.114	Effective projected surface area of driver diaphragm square meters
	176.7 sq in	
VD		Peak displacement volume of driver diaphragm(0 to peak) cubic inches
RE	6ohms	DC resistance of driver voice coil ohms
Dia	4"	Piston diameter inches
BL	25	BL Product N/A
Mms	125g	Effective moving mass grams
flux	1.22	Flux density tesla

## Bella Luna Diamante



**JBL E110 - 10" midrange - upfiring**

[JBL E110d Spec](#)



## **JBL 2425h - 1" compression driver tweeter - down firing**

[JBL 2425 Spec](#)

[JBL 2425 Physical Spec](#)



### **JBL 3120A Crossover**

500 - 2khz 12db/octave butterworth

2425: 800 - 20khz 110 dB spl

E110: 60 - 8000hz 96 dB spl

E155: 30 - 2000hz 100 dB spl



**Art Nouveau References - does it have to look so modern?**





Мусса  
91

