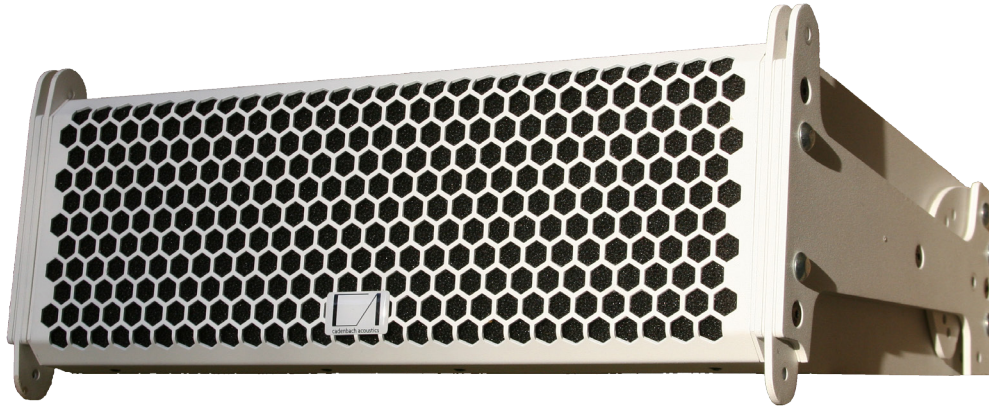


# DIVA 2 x 5 inch FIR size0 true line array loudspeaker

Data sheet



YOU ART. WE SOUND.



## Overview

DIVA is possibly the smallest true line array loudspeaker in the professional audio industry. It is purely made from aluminium, less than half a meter wide and weights only 9.5 kg. It is the perfect choice for small to medium theatres where invisible high end sound is a requirement at very low weight and high output.

DIVA offers the same sound, high frequency and coverage control via FIR filters as the bigger members of the family like DIVUS or DELILA with also via MDCP adjustable horizontal dispersion. It is typically used in arrays of 8 or more cabinets and will easily cover up to 40 meters. The vertical control of the system is due to the used 4 inch patented narrow slot planar wave high frequency driver unit outstanding, full vertical side loop free operation is provided up to 33 kHz. The totally symmetrical dipolar arrangement of the two 5 inch low mid frequency cone chassis around the high frequency unit, allows to reach the nominal horizontal dispersion already at 500 Hz. The reached coupling level between the units when building arrays of multiple speakers is remarkable and offers more SPL at lower THD.

TETHRA is the low frequency extension where full optical integration of the subwoofer into the system is needed, for higher low frequency levels the natural choice will be in most cases TEUTATES. Both offer full flying or ground stack integration for DIVA. Anyway all cadenbach acoustic sub woofers can be chosen to run with DIVA, as well as DIVA can support perfectly line arrays like DIVUS or DELILA.

On order DIVA incorporates a very power full two channel frequency modulated floating modulator amplifier module. Due to it's advanced high efficiency power technology it runs at any moment at very low temperature and needs no extra cooling at all.

## Operation

The frequency and phase response of DIVA is absolutely linear with only a minimum of variation at very low THD. DIVA is designed to run in linear phase mode by using cadenbach acoustics **FIR filter** of the HEIMDALL D1 digital controller. It's horizontal dispersion can be set mechanically via **MDCP** "Mechanical Dispersion Control Plates" to various symmetrical or unsymmetrical configurations from 60° to 140°.

## Applications

- Small concert halls, theatres and houses of worship, AV applications.
- Small Touring sound reinforcement, under balcony coverage.
- Down fill system for DIVUS and DELILA, side or front fill system.

## Features

- Very small footprint with only 420 mm width and high output level, with optional integrated amplifier
- Optimal integration with DIVUS, DELILA, TETHRA and TEUTATES sub woofer.
- Very flexible and precise horizontal coverage via MDCP and cadenbach acoustics FIR filters.
- Easy quick lock system for fast flown or ground stacked configurations

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## Technical Specifications

### Transducers

- Low frequency: **2 x 5.25 inches** (133.4 mm) Neodymium
- High frequency: **4 inches** (101.6 mm) Neodymium

#### Voice coil size and impedance

- Low frequency: **1.5 inches** (38 mm) Cu, 16 ohms
- High frequency: **1.75 inches** (44.4 mm) Al, 16 ohms

#### Diaphragm size

- High frequency: **1.75 inches** (44.4 mm) Polyester

#### Exit size

- High frequency: **4 inches** (101.6 mm) port

### Nominal Impedance

- Low frequency: **8 ohms**  
2 x 16 ohms / Z = 9 ohms
- High frequency: **16 ohms**  
Z = 19 ohms

### Output at 1m

- **138.5 dB SPL** ( 3 )  
driven with PAX P16 132 dB  
driven with internal amps 133 dB
- array of 4: 134 dB rms max ( 1 )
- array of 8: 140 dB rms max ( 1 )

### Sensitivity (SPL at 1m)

- Low frequency: **94 (90 Hz) dB / 120 dB**  
cont. at 260 watts
- High frequency: **112 (3 kHz) dB / 133 dB**  
cont. at 80 watts

### Power Handling

- Low frequency: **1200 watts** peak  
260 watts AES  
520 watts program  
rec. amp power on 4 ohms  
2800 watts
- High frequency: **450 watts** peak  
80 watts AES  
240 watts program  
rec. amp power on 4 ohms  
2800 watts

### Crossover type and frequency

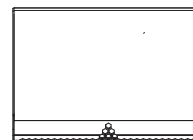
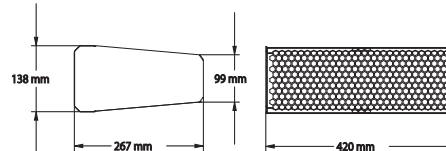
- Filter type: **FIR zero phase**
- Sub to Low: **80 Hz - 120 Hz**
- Low to Mid High: **1300 Hz**

### Frequency and Phase response

- Usable frequency range: **55 Hz - 33 kHz** ( 4 )
- Free field frequency response: 75 Hz - 31 kHz (-5 dB) linearity (+/- 0.5 dB)
- Phase response: **0° +/- 2°**  
from 300 Hz to 33 kHz

### Size and weight

- Height: **5.75 inches** (146 mm)
- Width: **16.54 inches** (420 mm)
- Depth: **10.63 inches** (270 mm)
- Weight:  
**83.78 lbs** (38 kg) internal powered model  
**79.37 lbs** (36 kg) external powered model



### Coverage

- Horizontal coverage symmetrical: 60°, 90° or 140° adjustable via MDCP plates
- Horizontal coverage unsymmetrical: 30°/45°, 30°/70° or 45°/70° and verse vice
- Vertical coverage: depending on array length and curving
- Vertical splay angle: adjustable from 0 - 10° ( 0,2° - 2,5° Steps )

### Speakers per PAX P16 channel

- For external powered model:  
**4 / 6** ( 2 ) both ways parallel via link

### Connection

- For external powered model  
**2 x NL4** (1+/1- LF, 2+/2- HF)

### Mechanical specifications

- Mounting: **2 Steal side plates**  
with 4 point quick lock
- Working load: 144 x Speaker-weight
- Construction: **3 mm Aluminum**  
hex stamped steal grill, steal side plates with integrated angle adjustment plates all powder coated, inside acoustic bitumen and foam damping.  
Internal amp module mounted on aluminum back plate with total passive fan free cooling ( 5 ).
- Flying frame: **Multi frame** CTG-2.5  
Adapter multi frame CTM-2.5/1.2D for use with TEUTAES sub woofer  
Adapter frame CTM-2.5/2.10 for use under flown DIVUS Line Arrays
- Transport Case: 2.5x6-4R combo case for 6x DIVA on 4 wheels

( 1 ) at 10% THD at 1m with sine burst signal 100 Hz - 5 kHz (array of 4, 0° splay)

( 2 ) possible only with short length cables.

( 3 ) SPL max peak, test signal: pink noise with crest factor 6 dB.

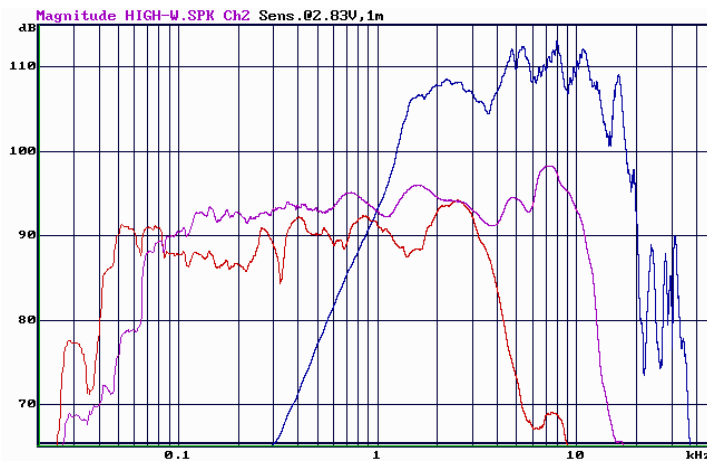
( 4 ) Full-range mode, providing 110 dB @ 55 Hz

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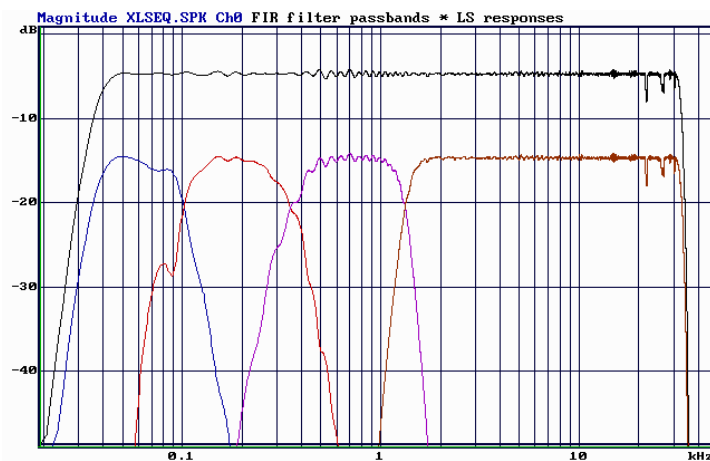
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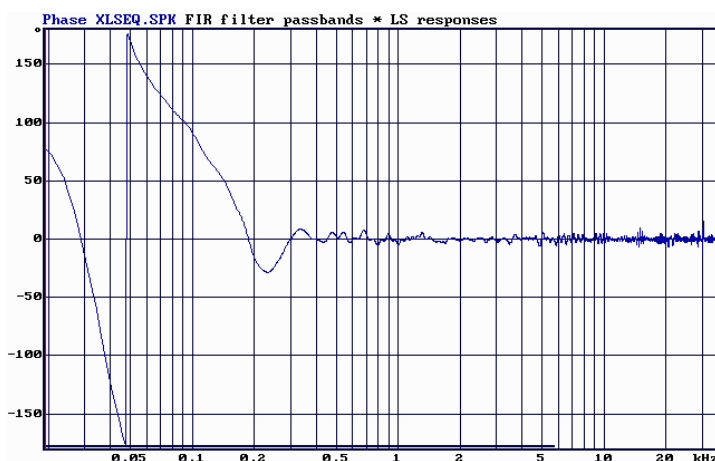
## Measurements



Frequency response unprocessed of TEUTATES, DIVA LOW and DIVA HIGH scale 20 Hz to 43 kHz



Frequency response with FIR Filter of TEUTATES, DIVA LOW with 2 way Multipass, DIVA HIGH and summation curve, scale 20 Hz to 43 kHz



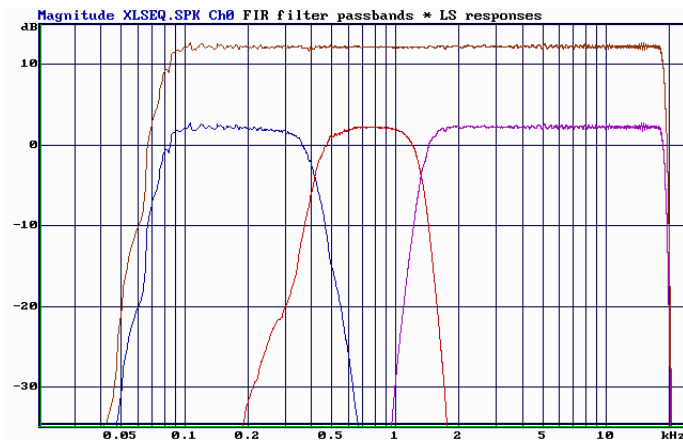
Phase response summation with cadenbach acoustics zero Phase FIR Filter of TEUTATES, DIVA LOW, DIVA HIGH, scale 20 Hz to 35 kHz

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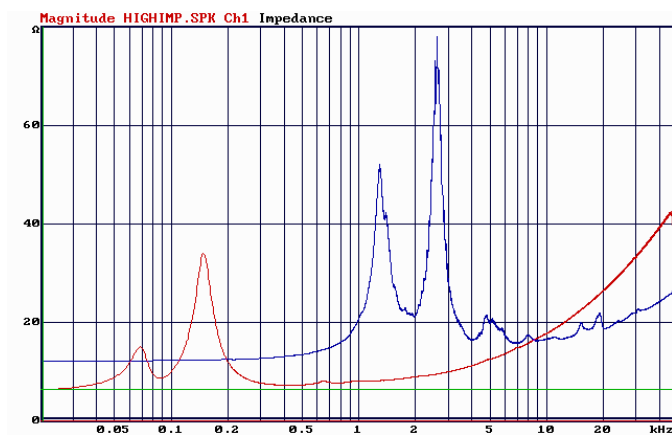
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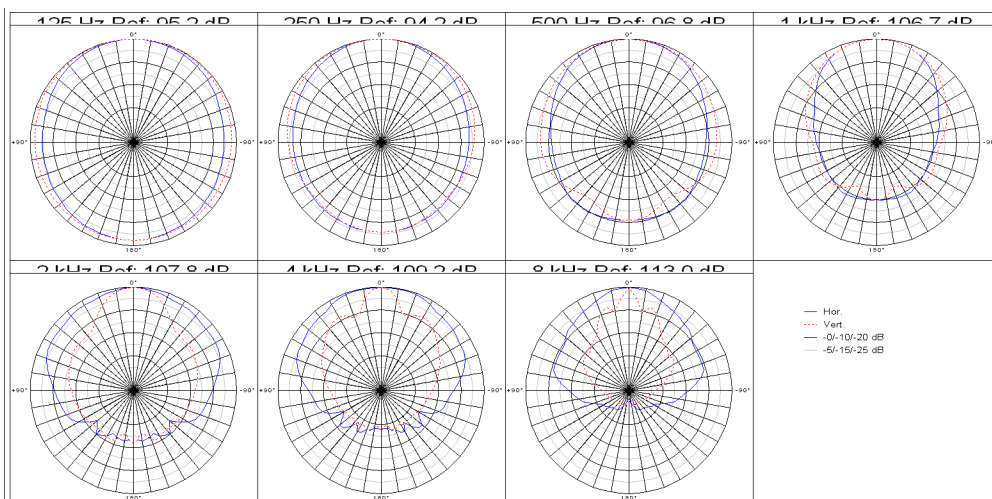
## Measurements



Frequency response with full range FIR Filter of DIVA LOW with 2 way Multipass, DIVA HIGH and summation curve, scale 20 Hz to 30 kHz



Impedance plot of DIVA LOW and HIGH



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