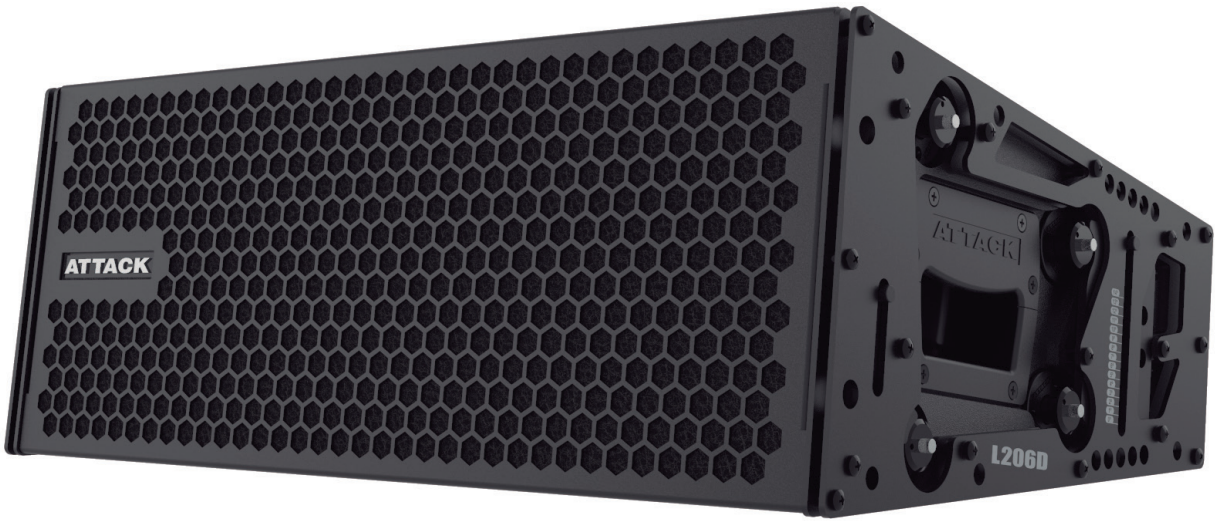
VERTCON
SERIES

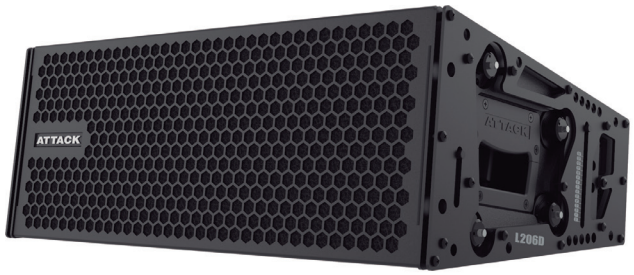


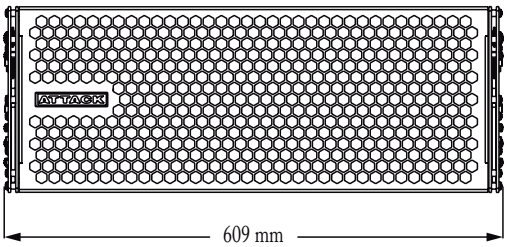

# DATASHEET

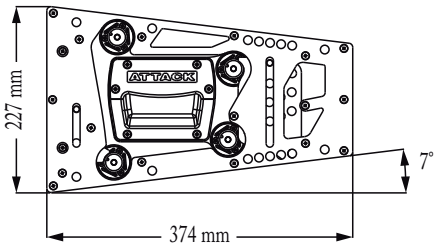
## L206D Ultra Compact High Power Line Array Loudspeaker

ATTACK
AUDIO SYSTEM
HEARTHEDIFFERENCE

| | |
|---|---|
| **Dimensions** | 227mm x 609mm x 374mm (HxWxD) |
| **Weight** | 27 kg |
| **Enclosure** | MadeFibra® |
| **Finish** | Textured black polyester |
| **Protective Grille** | Hex-stamped steel<br>Black textured paint coating |
| **Audio connection** | Female XLR and Male XLR loop thru |
| **AC connection** | IP65-3P with Looping Output<br>NBR14.136 - 20A Output |




The L206D is a self powered, ultracompact and high performance two-way loudspeaker. Member of the Vertcon family, it was designed for small areas with high performance and exceptional coverage. The extended headroom for high frequency ensures flat response for a wide range from 110 Hz to 20 kHz. The combination of 100º horizontal coverage with the high headroom factor provides detailed resolution for signals with delicate transients throughout the coverage area.

The L206D is the choice for arrays in locations that offer few space and for applications that do not require high power and wide distance or where reduced size and weight are advantages. Flexibility and practicality in the assembly of the system are guaranteed by the use of materials of high safety standard and mechanical resistance. The Flown mode system is made of steel and is laser cut ensuring maximum precision in the fittings and the possibility of stacking up to 16 units in a single Bumper.

The relationship between power, efficiency, size and ease of use makes the L206D a surprising and remarkable experience in performance, and it can be used in theaters, churches, clubs, sports gyms and shows.

The high frequency section is composed of a compression driver with an 1-inch throat, 1.77-inch voice coil with a polyester diaphragm, coupled to a waveguide and this assembly coupled to a constant directivity horn. It uses a dedicated amplification channel and a digital signal processing system that corrects the frequency and phase response in order to perfectly match the bass section.

The low frequency section has two loudspeakers with a 6-inch cone and a 2-inch voice coil coupled to a phase plug capable of creating two acoustic centers, ensuring perfect coupling at the highest frequencies of the actuation range. It has a dedicated amplification channel and a proper digital processing system with specific adjustments that enable an extended frequency response in this section.

Being a self powered system, the L206D incorporates two high-power class-D amplification channels, with a dedicated limiter that protects and extends transducers life at very high power levels and prevents non-linear operating situations. The amplification and processing system is mounted in an individual unit that allows for an extremely easy in-field exchange. The amplifier and processor are powered by a switching mode supply that boasts a PFC circuit capable of providing constant power from 100 to 240 V AC.

The L206D is ideal for applications as Frontfill or Sidefill using the SPU-L206D accessory or the BUMPER L206D accessory. Gallery coverings can also be performed using the SPU-L206D accessory. The architecture of this loudspeaker was designed for perfect phase response coherence between all Vertcon line models.

Options for the L206D include white polyester paint (custom-made) and the EMV-L206D which is a structure for stacking and transporting multiple units.

## KEY FEATURES

- Exceptional relationship between power, efficiency, size.
- Wide horizontal coverage and good polar pattern.
- Compact and low profile front view.
- Practical and versatile connection hardware system with possibility of mounting in line arrays, frontfill, sidefill and downfill.
- Perfect phase coherence enabling coupling with other Vertcon line products (it has 3.4ms of latency).

## APPLICATIONS

- Shows.
- Corporate events.
- Sports centers, theaters, churches and clubs.
- Sidefill.
- Frontfill and under galleries.

## Acoustical

| | |
|---|---|
| Operating frequency range[1] | 100 Hz - 20 kHz |
| Frequency response[2] | 110 Hz - 20 kHz -6 dB |
| Phase response | 170 Hz - 17 kHz ±40º |
| Maximum linear average SPL[3] | |
| Free field | 114 dB (Z) / 112 dB (A) @ 1m |
| Ground plane | 119 dB (Z) / 117 dB (A) @ 1m |
| Maximum linear peak SPL[4] | |
| Free field | 126 dB (Z) / 125 dB (A) @ 1m |
| Ground plane | 131 dB (Z) / 130 dB (A) @ 1m |

## Coverage

| | |
|---|---|
| Horizontal | 100º |
| Vertical | Variable, dependent on stacking height and configuration |

## Transducers

| | |
|---|---|
| LOW frequency | Two 6" Speakers/Nominal impedance 4 Ω/Voice coil diameter 2" |
| HIGH frequency | Compression driver/Nominal impedance 8 Ω/ Voice coil diameter 1.77"/Diaphragm diameter 1.77"/ Throat 1" |

## Audio input

| | |
|---|---|
| Type | Differential, electronically balanced |
| Connectors | Female XLR and Male XLR loop thru |
| Input impedance | 10 kΩ Unbal and 20 kΩ Bal |
| Connection | Pin 2: signal +/Pin 3: signal -/Pin 1: ground |
| CMRR | >50 dB, typically 70 dB (50 Hz - 500 Hz) |
| Nominal input sensitivity | +4 dBu (1.23 V rms - 1.74 Vp) constant is typically the beginning of signal limitation with noise or music |
| Maximum input level | +20 dBu |

## Amplifier

| | |
|---|---|
| Type | Class D |
| THD - IMD | <0.05% |

## AC Power

| | |
|---|---|
| Power supply type | PFC pre-regulator and Flyback converter |
| Connectors | IP65-3P with Looping Output, NBR14.136-20A Output |
| Operating range | 100-240 V AC rms, maximum 275 V AC rms, minimum starting voltage 100 V AC rms |
| Standby current consumption (mA rms) | 305mA@100Vac / 240mA@127Vac / 180mA@220Vac |
| Maximum continuous current consumption for long periods (A rms)(>10seg)[5] | 1.5A@100Vac / 1.2A@127Vac / 0.7A@220Vac |

## General information

| | |
|---|---|
| Indicators | Led On/Led Signal/Led Limiter/Led CSD |
| Protections | Overvoltage, undervoltage, short-circuit, temperature, DC, individual limiter per channel, audio starting fader |
| Ventilation | Micro ultra silent fan with speed control as a function of the temperature |

## NOTES

[1] Recommended maximum operating frequency response. The frequency response depends on the acoustics conditions of the environment.

[2] Measured with 1/3 octave frequency resolution in semi-anechoic chamber at four meters of distance. Frequency response with maximum variation of ±3dB.

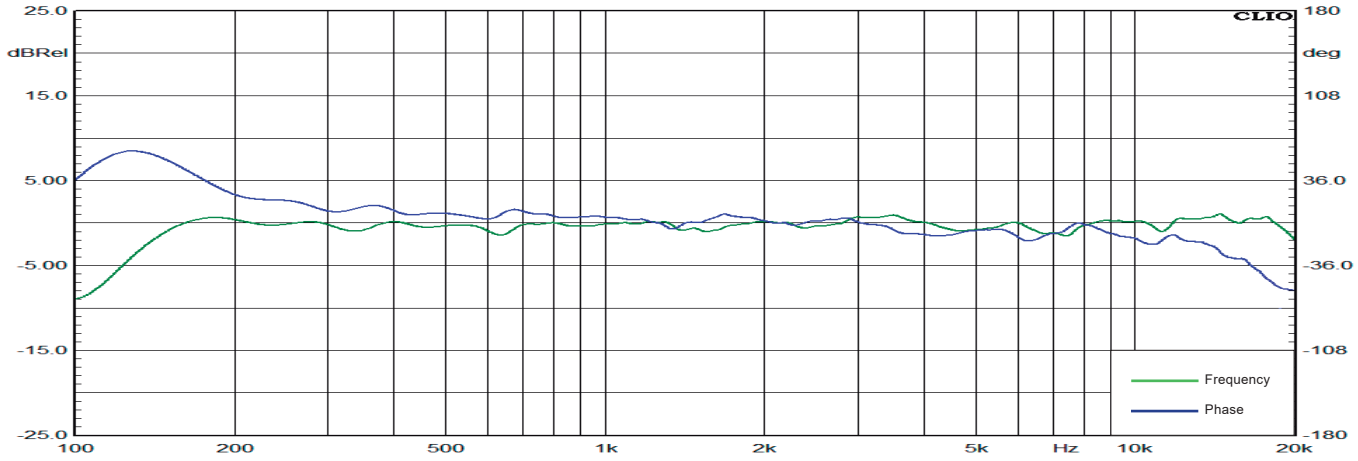
[3] Measured with pink noise (FC=12dB), linear average SPL maintained for at least one hour, microphone on the axis.
The average SPL value (measured with Z-weighted curve) in free field is used in the GLL file for use in prediction in the Ease Focus and Ease softwares.

[4] Measured with pink noise (FC=12dB), linear peak SPL maintained for at least one hour, microphone on the axis.

[5] The AC power cable must have a gauge compatible with the current transmission capacity required by the loudspeaker in continuous current consumption regime, otherwise it will not deliver the specified power to the transducers. Maximum current value measured with pink noise (FC=12dB).

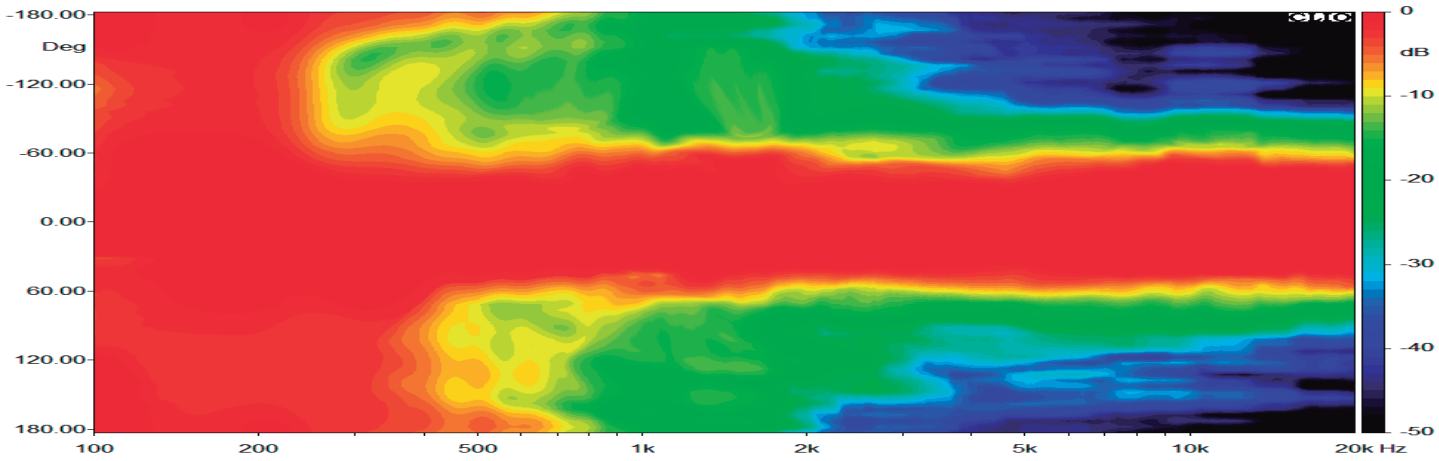
## ACOUSTIC CHARACTERISTICS

### Frequency and phase response



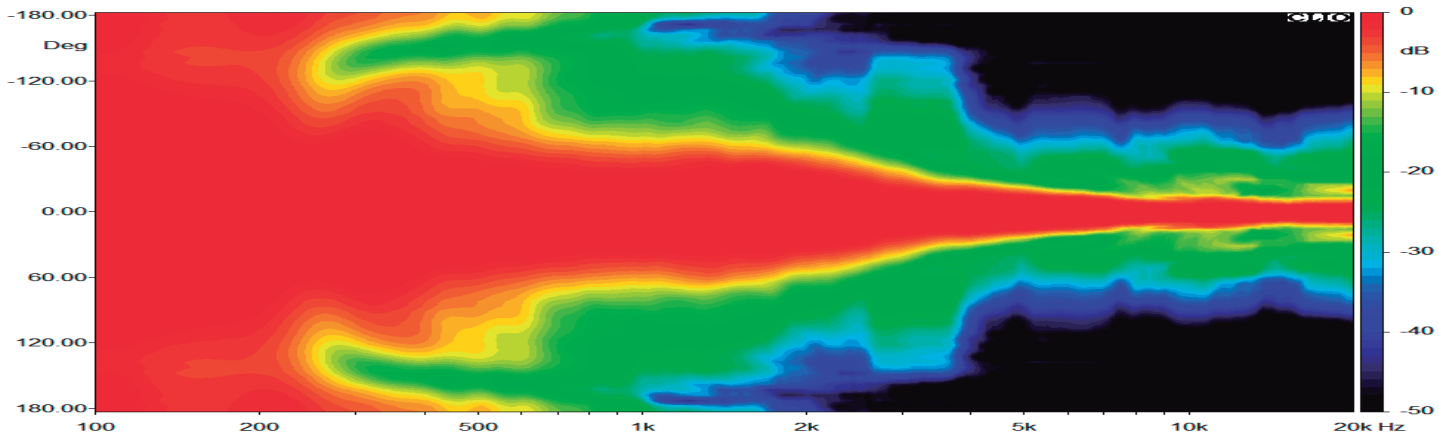

Measured in semi-anechoic chamber, on axis and 1/3 octave resolution

### Horizontal directivity




Measured in semi-anechoic chamber, on axis and 1/3 octave resolution

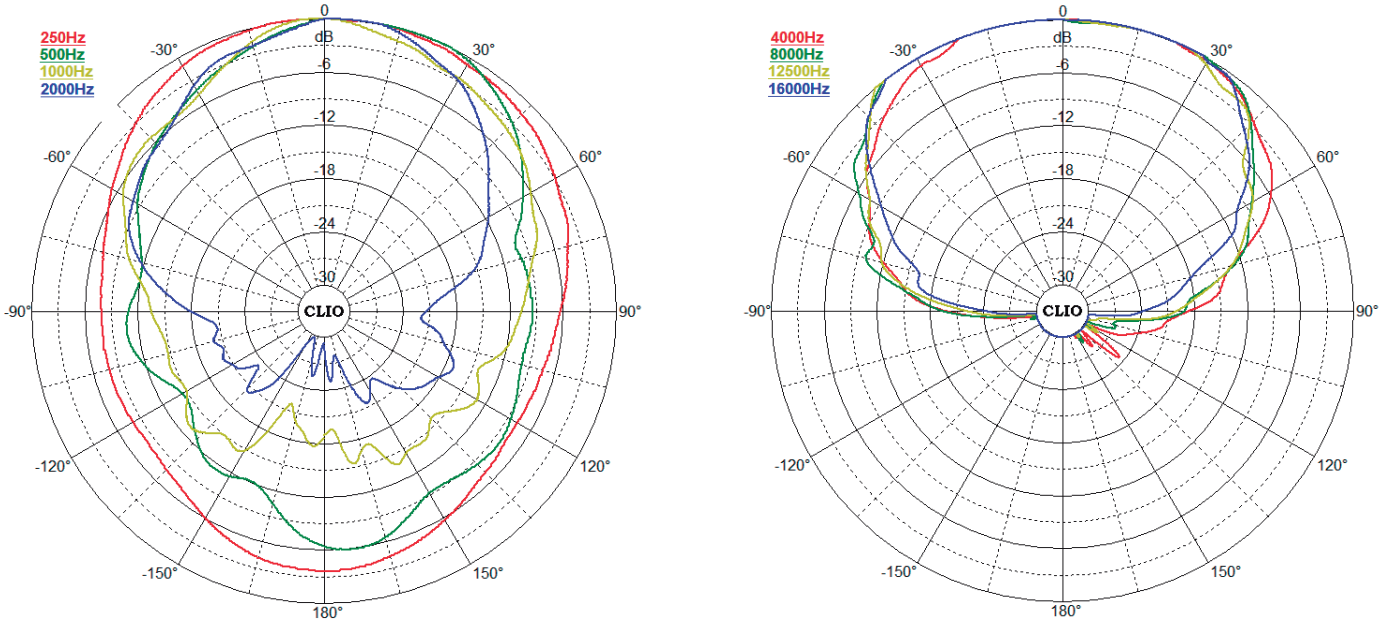
### Vertical directivity




Measured in semi-anechoic chamber, on axis and 1/3 octave resolution

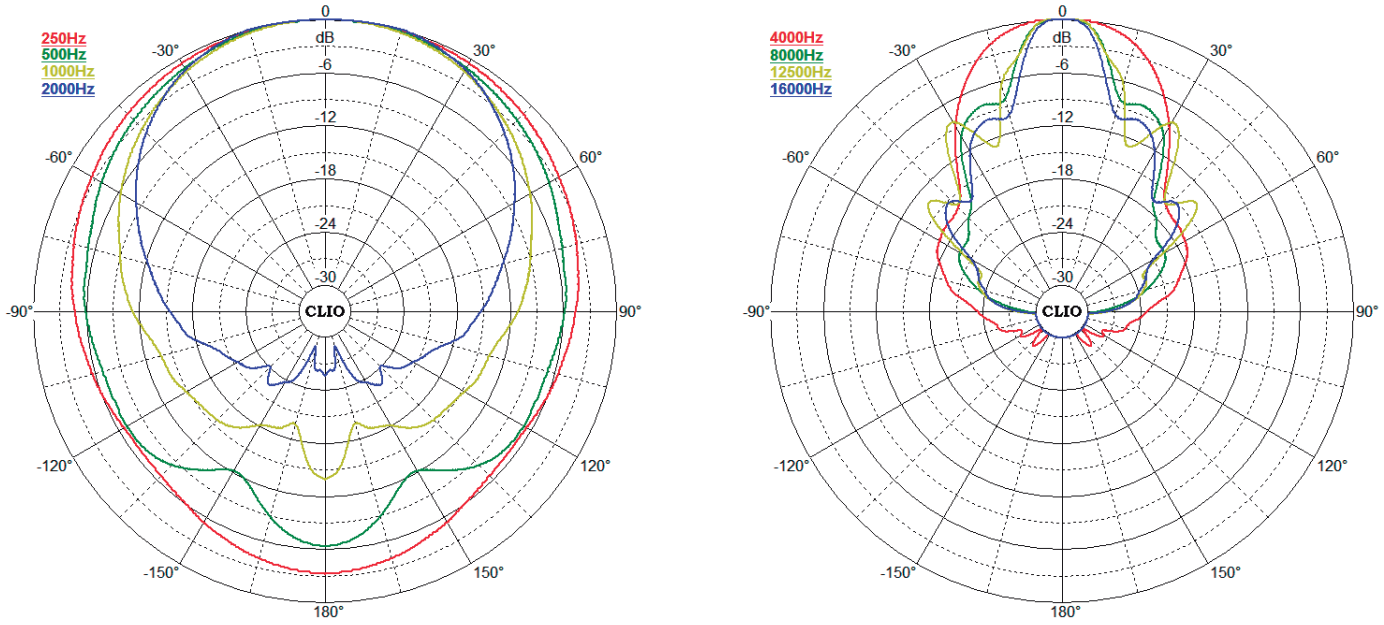
## ACOUSTIC CHARACTERISTICS

### Polar diagram - Horizontal



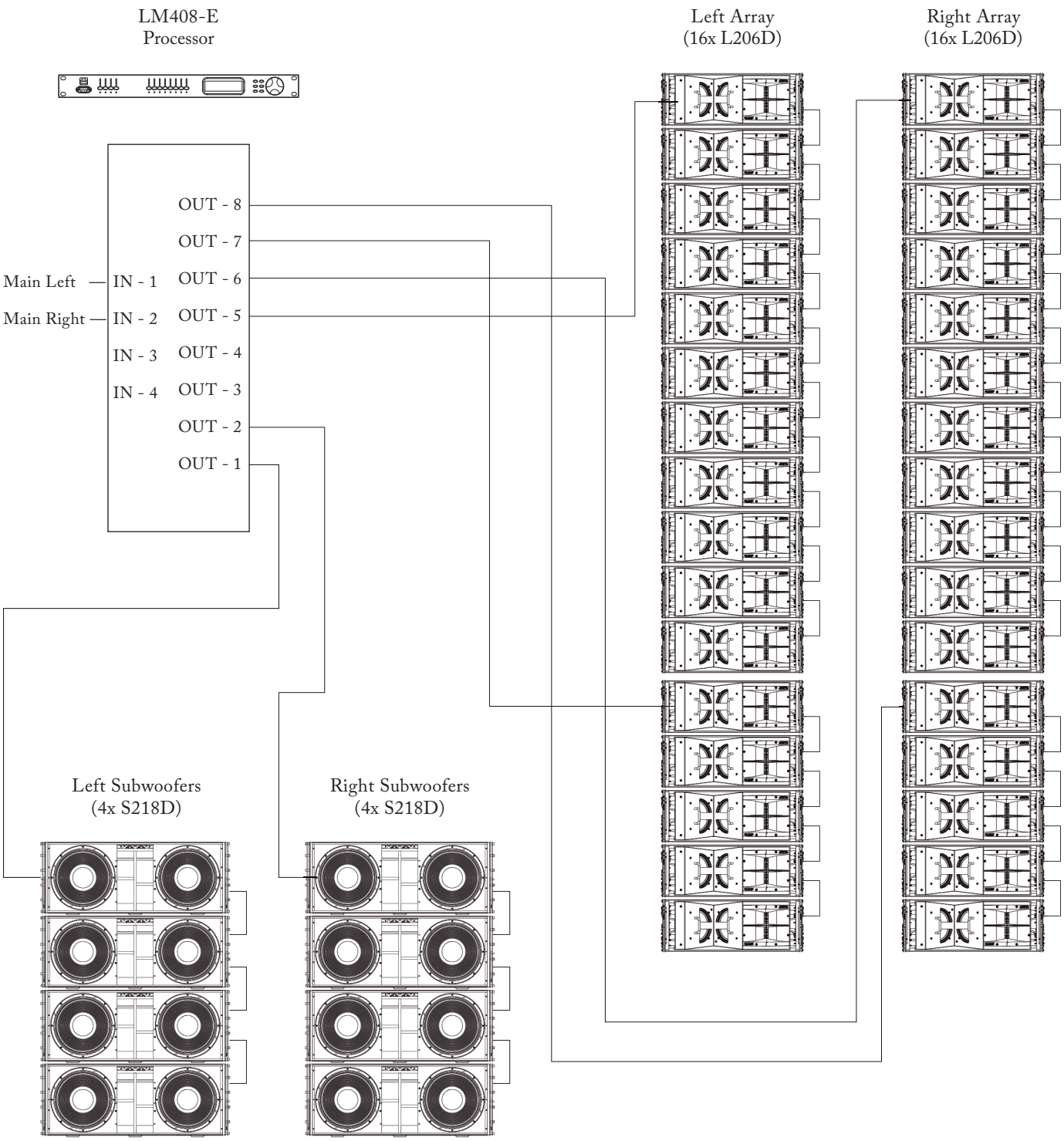

Measured in semi-anechoic chamber, on axis and 1/3 octave resolution

### Polar diagram - Vertical




Measured in semi-anechoic chamber, on axis and 1/3 octave resolution

## CONNECTION DIAGRAM OF A TYPICAL SOUND SYSTEM

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