



KEY FEATURES

- High-Output Coaxial Active Stage Monitor
- Coaxial Transducers, 12" woofer, 1" HF compression driver horn-loaded
- Single magnet neodymium motor
- 90° x 60° controlled coverage
- Dual angle monitor configuration (35° or 50°)
- CORE LT processing
- Digitally controlled Class D amplifier module with SMPS
- Dual-angle pole holder for multi-purpose applications
- Very compact & lightweight with low-profile design

APPLICATIONS

- Live Stage monitoring
- TV and broadcast
- Theatres
- Corporate and A/V
- House of Worship

TECHNICAL SPECIFICATIONS

SYSTEM

| | |
|----------------------------------|--------------------------------|
| System's Acoustic Principle | 2-way coaxial vented enclosure |
| Frequency Response (± 3 dB) | 75 Hz – 18kHz (Processed) |
| Horizontal Coverage Angle | 50° (-6dB) |
| Vertical Coverage Angle | 70° (-6dB) |
| Maximum (peak) SPL | 128 dB SPL @ 1m |

TRANSDUCERS

| | |
|----|---|
| LF | One 12" (305mm), 2.5" (50mm) voice coil, waterproof cone |
| HF | One 1" driver, 1.7" (44mm) aluminium voice coil, polyimide diaphragm, horn-loaded |

ELECTRICAL

| | |
|---------------------------|--|
| Input Impedance | 20 k Ω balanced, 10 k Ω unbalanced |
| Input Sensitivity | +4dBu / 1.25V |
| Signal Processing | CORE LT digital processing, 24 bit AD/DA converters |
| Controls | 5 Presets (NORMAL WEDGE/COUPLED UNITS/LOW CUT/FOH/FOH LOW CUT) |
| Amplifier Type | Class D with SMPS |
| Output Power | 900W + 300W |
| Mains Voltage Range (Vac) | 220-240 V~ or 100-120 V~ $\pm 10\%$ 50/60 Hz (internally selectable) |
| IN / OUT Connectors | Neutrik® XLR-M / XLR-F |
| Mains Input Connector | Neutrik® powerCON™ (NAC3MPA) |
| Mains Link Connector | Neutrik® powerCON™ (NAC3MPB) |
| Cooling | Variable speed DC fan |

ENCLOSURE & CONSTRUCTION

| | |
|--------------------|--|
| Dimensions | 451mm W x 322mm H x 405mm D |
| Taper | Stage Monitor: 40° and 60° |
| Pole holder | One on the side, dual angle |
| Enclosure Material | 15mm, reinforced phenolic birch |
| Paint | High resistance, black water based paint |
| Net Weight | 15 kg / 33 lbs |

DESCRIPTION

The CXL12A is a coaxial stage monitor designed specifically for live sound, although the very compact, low-profile enclosure also makes it suitable for theatre and television applications. The combination of a high-performance coaxial transducer, a carefully designed cabinet, and powerful electronics provides very high SPL before feedback and excellent intelligibility even at very high power.

The transducer's coaxial design offers a very stable acoustical pattern in both the horizontal and vertical axes. The very compact, single magnet neodymium motor reduces the delay between the two sources, eliminating time and phase problems, and guarantees high performance with a consistent weight reduction.

The high frequency range is reproduced by a low-distortion compression driver equipped with a 1.7" aluminium voice coil and polyimide diaphragm. The custom designed horn provides a precise and controlled dispersion of 50° horizontal and 70° vertical, allowing an excellent performance at close listening distance and, at the same time, a consistent off-axis coverage.

The 12" woofer employed in the reproduction of the low frequency range is equipped with a 2.5" voice coil. Thanks to a special treatment process that makes the cone water repellent, the CXL12A is able to perform in adverse weather conditions and is therefore suitable for outdoor use.



CABINET DESIGN

The reduced size of the Baltic birch cabinet (only 32cm high and 45cm wide) makes the CXL12A a very compact and lightweight stage monitors and makes it suitable for all applications where unobtrusive size is a must. This includes not only live concerts, but also theatre shows and TV applications.

The reduced weight (15 kg) and the handles on both sides of the cabinet make it very easy to transport the monitor and to position it on stage. A convenient dual-angle pole holder allows the CXL12A to be mounted on a standard speaker stand to be used as a multipurpose front of house loudspeaker.

The possibility to position the cabinet with two different angles to the floor (35° and 50°) enables it to be placed at differing distances from the musicians according to the size of the stage and to the kind of monitoring needed.



SYSTEM PROCESSING

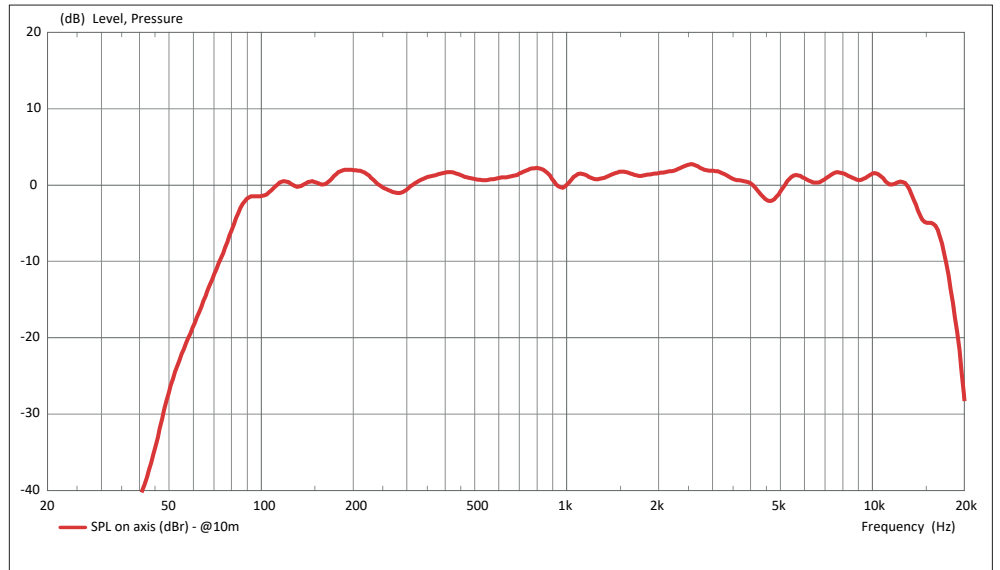
The system processing is based on the CORE LT DSP platform designed by the PROEL R&D Laboratories, featuring high-performance signal processing and high-definition 24bit converters, capable to deliver an outstanding sound definition and dynamic performance.

The CORE LT DSP makes it possible to set an optimal time alignment for the crossover filter resulting in a linear phase response. The correct acoustic filtering has been achieved using the Constant Power Crossover technique that, thanks to a particular phase relation, results in a very smooth transition between LF and HF and an even dispersion in the crossover region.

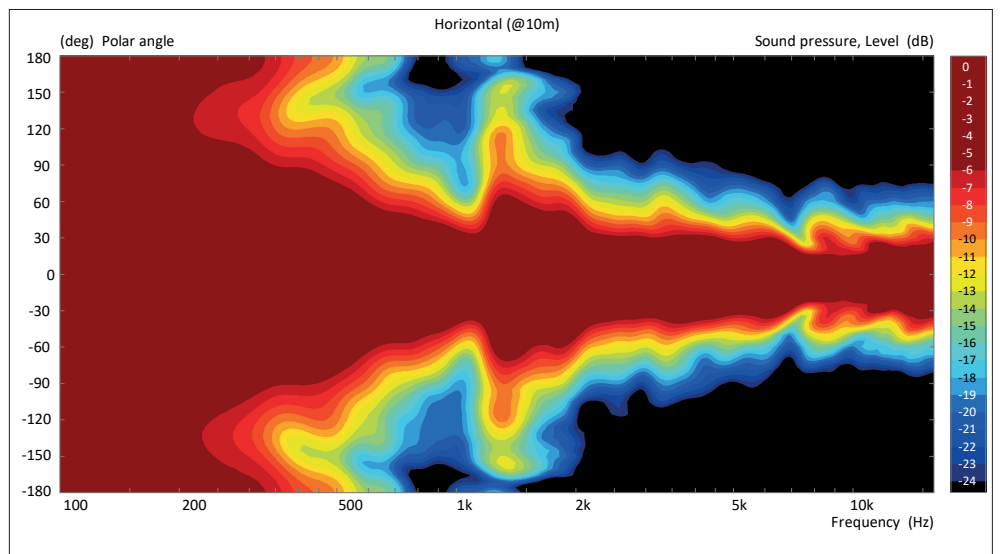
The CORE LT DSP signal processing includes a sophisticated Dynamic EQ, able to shape accurately the system's sound while maintaining a full dynamic range at any level. In addition the CORE LT DSP offers an extensive dynamic protection to the system, for getting always the maximum undistorted output.

5 EQ PRESETS (NORMAL WEDGE, COUPLED UNITS, LOW CUT, FOH, FOH LOW CUT) can be easily selected to adapt the monitor to different kinds of application, including the use as a front-of-house system.

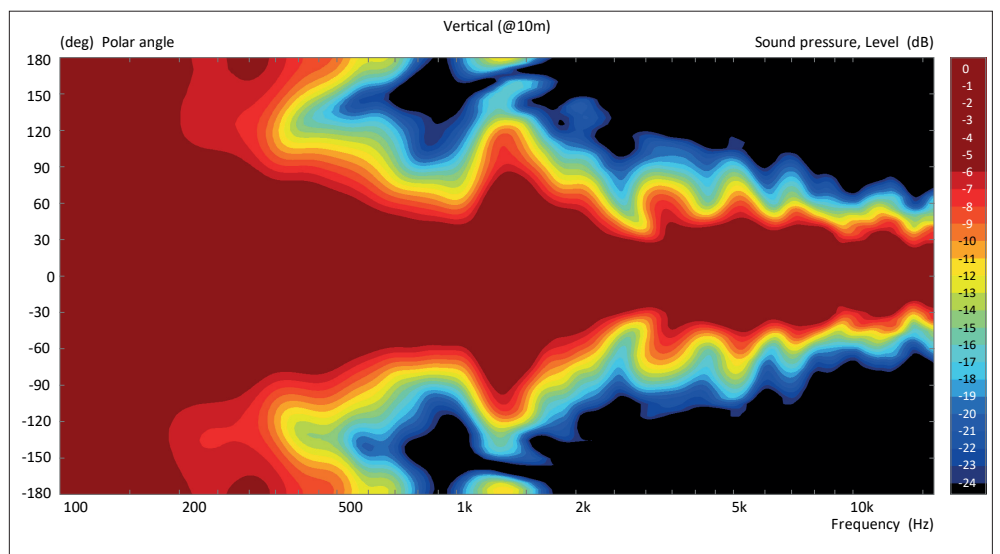
CXL12A frequency response



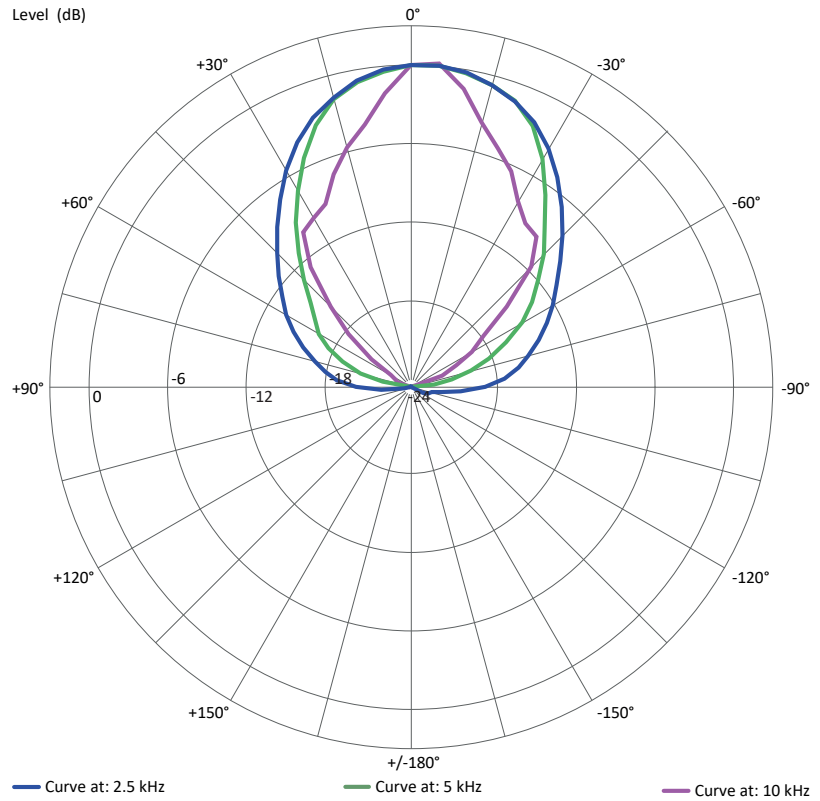
CXL12A HORIZONTAL directivity map



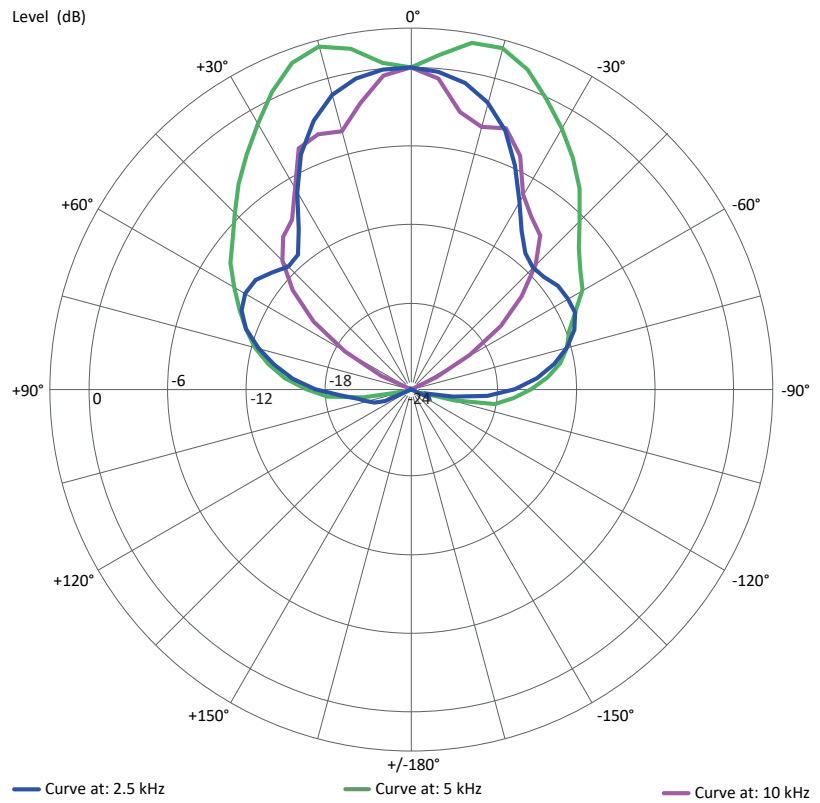
CXL12A VERTICAL directivity map



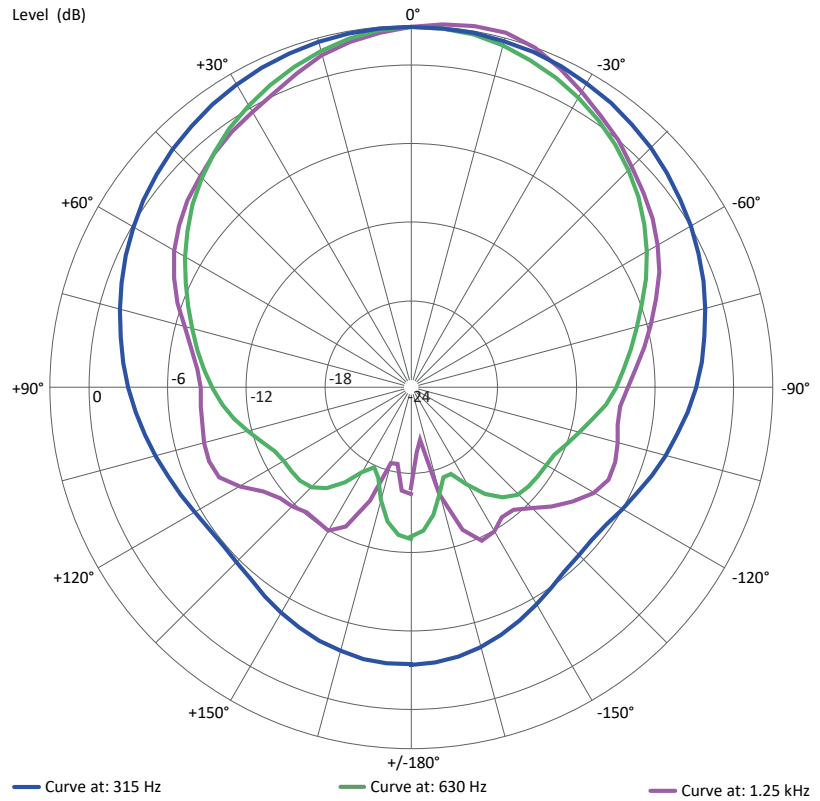
CXL12A HF HORIZONTAL polar diagram



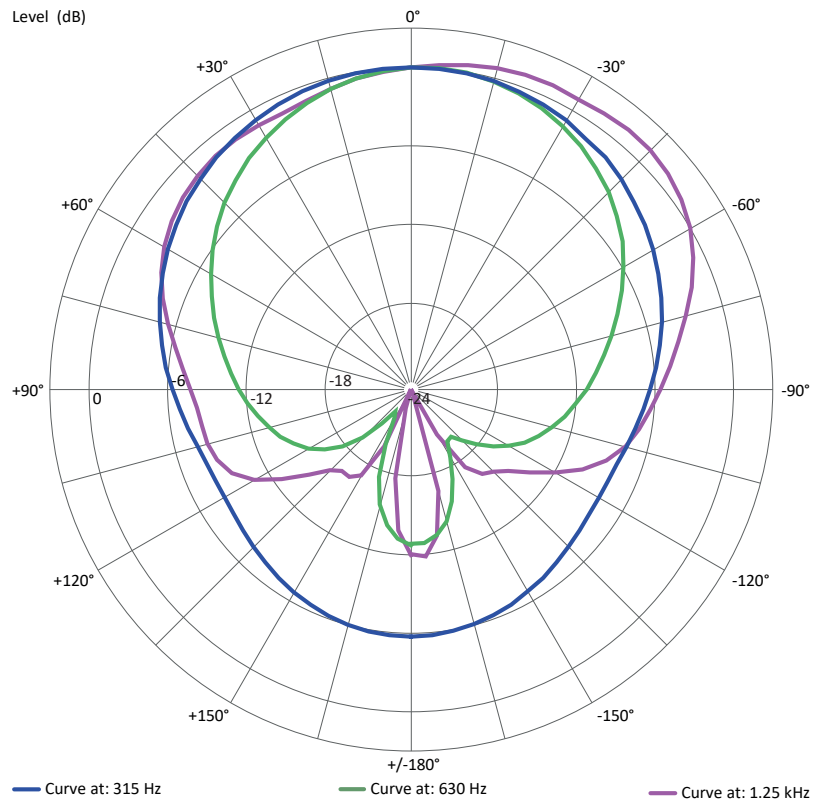
CXL12A HF VERTICAL polar diagram



CXL12A LF HORIZONTAL polar diagram



CXL12A LF VERTICAL polar diagram



POWER AMPLIFIER

The CXL12A is powered by a DA Series Class D power amplifier with SMPS. The innovative technology used for these amplifiers offers top-of-the-range performance, such as superior sound definition at any audio frequency, very high dynamics even for low level signals, and very low distortion even at maximum power.

The superior sound quality can be compared with top-of-the-range AB-class analogue systems, while the DA module features higher dynamic range, very compact size, light weight, and efficiency better than 90%. Output power is optimized specifically to the drive units for efficient power transfer, with the low frequency section producing 900 watts and 300 watts being available for the high frequency compression driver. Input and link connections are via balanced 3-pin XLR connectors, and a ground lift switch is provided for hum-free operation. Mains power is connected through a locking Neutrik® powerCON™, and a power out connector allows mains power to be linked to additional CXL12A cabinets.



ENGINEERING DRAWING

