

NUQ SERIES ENGINEERING INFORMATION

The NuQ-12DP is a full range self-powered two-way loudspeaker enclosure incorporating integral amplifiers and control electronics. The use of DSP amplifier technology ensures an exact match between amplifier and speaker for optimum acoustic output, and offers exceptional ease of use by having the entire electro-acoustic system in one convenient, easily transportable physical package. The NuQ-12DP is designed for use in mobile speech and music sound reinforcement applications.

The NuQ-12DP features a new generation of innovative Class D power amplifier module, utilising revolutionary 96kHz DSP technology to give operating efficiency in excess of 90%.

The two-way NuQ-12DP loudspeaker consists of a front loaded 12" neodymium low frequency driver and a 1.4" neodymium high frequency compression driver on a rotatable 80°H x 50°V HF Converging Elliptical Waveguide™ in a reflex-loaded enclosure.

The comparatively short HF horn flare ensures that the wavefront is shaped smoothly, eliminating reflections in the throat area while giving excellent pattern control. The waveguide can be rotated within the enclosure, making it possible to swap the horizontal and vertical coverage patterns.

The rear panel carries a fully integrated Class D amplifier and control electronics module, and

incorporates high performance limiters set to optimise the continuous power and excursion threshold for the specific loudspeaker model. Two independent amplifier channels power the LF and HF drivers separately in order to maximise headroom. A Neutrik™ Powercon connector provides mains input to the unit—the switch mode power supply is auto-sensing over a range from 100 volts to 240 volts—and 3-pin XLR's are used for input and parallel link signal connections. RJ45 network connectors enable multiple loudspeakers to be controlled and monitored over a BVNet network using TurboDrive™ software.

The cabinet includes a pole mount socket for use with 35mm poles and speaker stands. Rigging points are provided for use with flying yokes and M10 shoulder eyebolts. It is constructed from pre-bent plywood, which entirely eliminates four cabinet joints and provides additional benefits of superior strength, low weight and reduced internal reflections.

The symmetrical cabinet shape creates an additional role as mirrored left/right monitor wedges as well as for front-of-house applications. It is finished in black semi-matt textured paint; white textured paint is optionally available. A recessed flush handle is provided for easy handling.



FEATURES

- CEW™ technology**
- Digitally self-powered**
- Class D amplifiers**
- Rotatable HF waveguide**
- Pole mount socket**
- OmniMount™ compatible**

APPLICATIONS

- Front of house**
- Floor monitor**
- Dry hire and rental**
- Theatre**
- Houses of Worship**
- Corporate / industrial**

DIMENSIONS (HxWxD)	655mm x 373.5mm x 340mm (25.8" x 14.7" x 13.4")	
NET WEIGHT	23kg (50.6lbs)	
COMPONENTS	1 x 12" (305mm) LF driver, 1 x 1.4" (35mm) HF driver on a Converging Elliptical Waveguide™	
FREQUENCY RESPONSE ¹	55Hz - 20kHz ±4dB	
NOMINAL DISPERSION ²	80°H x 50°V@-6db points. Rotatable waveguide allows swap of horizontal and vertical pattern	
CALCULATED MAX SPL	127dB continuous ³ , 133dB peak ⁴	
CONSTRUCTION	15mm (5/8") birch plywood; rebated, screwed and glued. Finished in black semi-matt textured paint. One recessed carrying handle	
GRILLE	Powder coated perforated steel with acoustically transparent reticulated foam	
CONNECTORS	Input: (1) XLR female, Link: (1) XLR male, pin 2 hot; Neutrik Powercon; (2) RJ45 network port	
AMPLIFIER	TYPE:	Class D inc SMPA and networked DSP
	POWER OUTPUT:	2 x 800 watts continuous @ 8 ohms (1kHz, 0.01% THD)
	DYNAMIC RANGE:	110dB
	INPUT CLIP:	10dBu
	BANDWIDTH:	20Hz - 20kHz ±0.5dB
	POWER REQUIREMENTS:	100V to 240V AC @ 50/60Hz
FLYING HARDWARE	M10 internal rigging points for flying yokes and M10 eyebolts	
OPTIONS	Optional colour: white textured paint	
SPARES AND ACCESSORIES	LS-1221	12" (305mm) LF loudspeaker
	RC-1221	Recone kit
	CD-213.2	1.4" (35mm) HF compression driver
	RD-213.2	Replacement diaphragm
	MG-NuQ12	Replacement grille
	NuQ-FY12	Flying yoke
	PB-55	Wall bracket, pole mount fixing

Notes

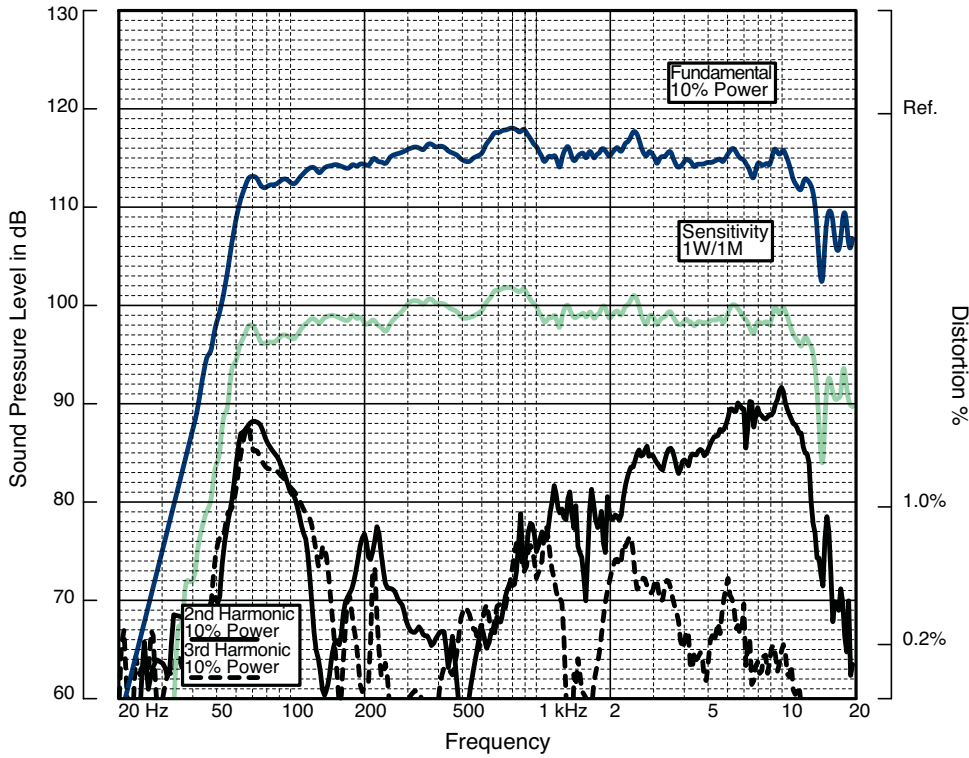
¹Measured on axis

²Average over stated bandwidth

³Unweighted diode-clipped pink noise. Measured in a half space environment

⁴Verified by subjective listening tests of familiar program material, before the onset of perceived signal degradation

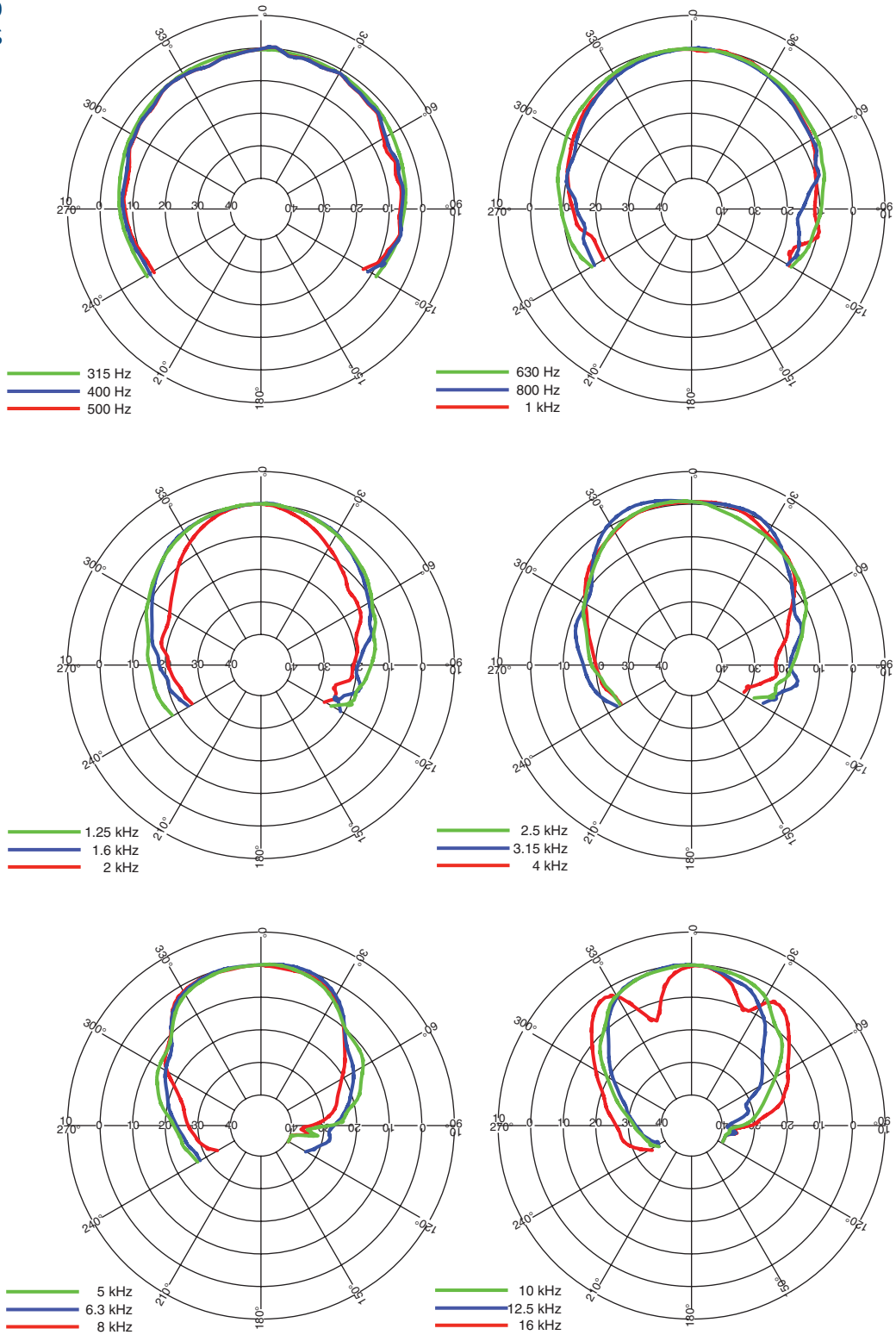
FREQUENCY RESPONSE



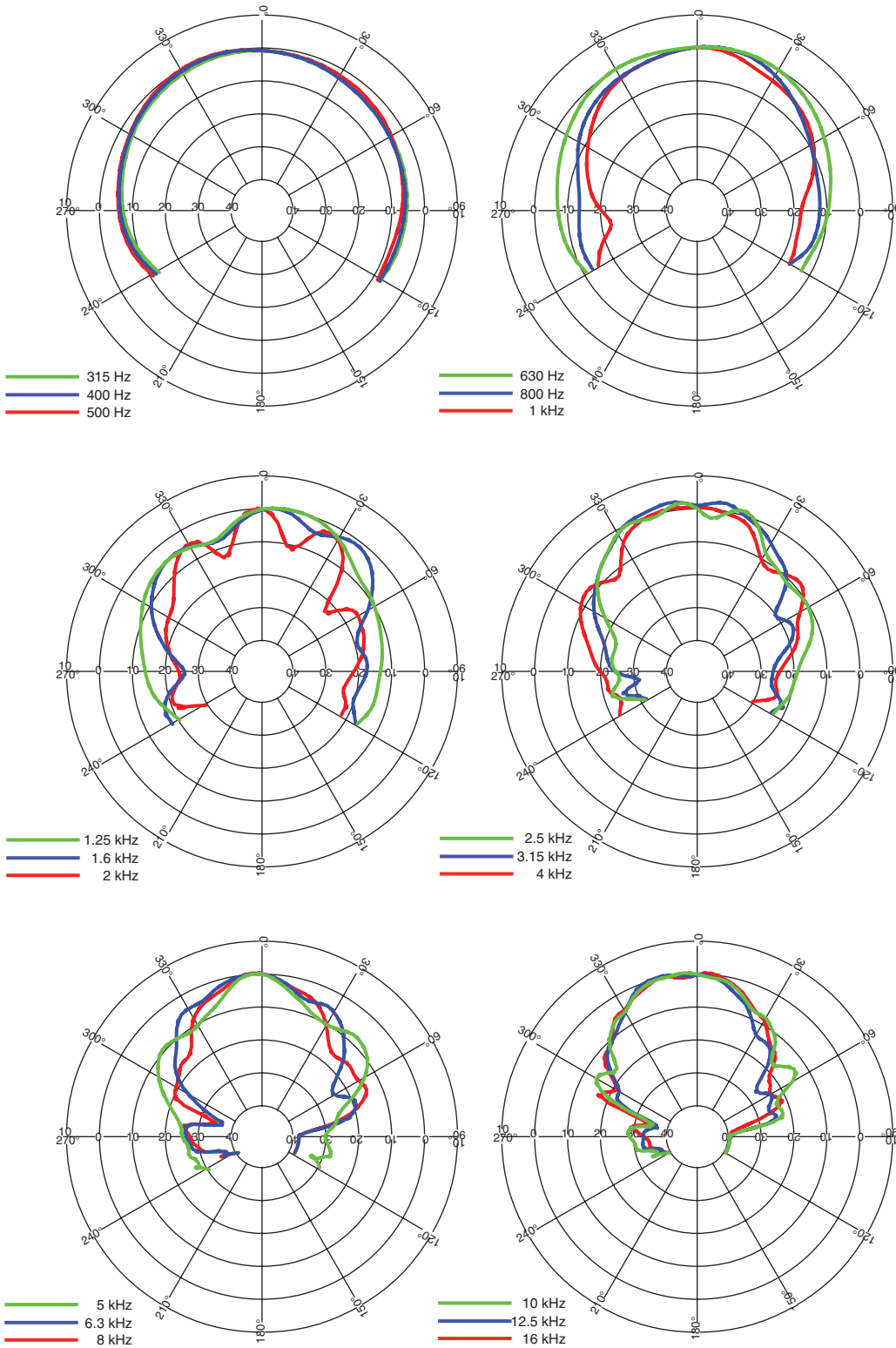
Impedance A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through an unprocessed loudspeaker system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled to represent 1 metre. **2nd & 3rd Harmonic Distortion** Distortion measurements were obtained using an Audio Precision harmonic distortion analysis system and comply with AES recommendations for enclosure measurement (AES paper ANSI S4-26-1984). **Data Conversion** All graphs were digitally generated using the APEX custom software system, designed to translate data derived from Audio Precision 'System One' test equipment into AutoCAD™. This program enables graphical information to be plotted to a high degree of accuracy.

NOTES ON MEASUREMENT CONDITIONS

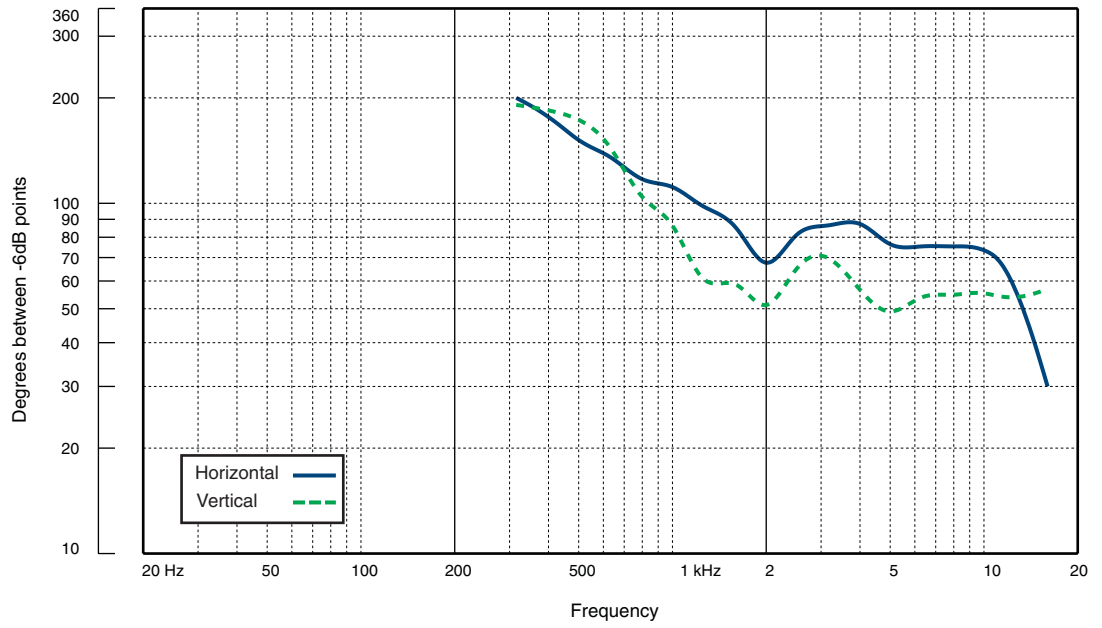
HORIZONTAL THIRD
OCTAVE POLARS



VERTICAL THIRD
OCTAVE POLARS



BEAMWIDTH



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The cabinet is fitted with rigging points on the top, bottom and sides which allow it to be flown or mounted in a variety of ways to suit differing applications.

An adjustable flying yoke enables the cabinet to be fixed to a ceiling or truss (with optional SC-01 scaffold clamps) with the ability to rotate and angle downwards.

The integral pole mount socket enables the cabinet to be used with standard 35mm tripod stands and poles, or wall-mounted using the universal PB-55 pole bracket.

M10 eyebolts rigging points are also available on the top, sides or bottom to provide an additional method of rigging cabinets in permanent installations.

INSTALLATION AND RIGGING HARDWARE

