Technical Data Sheet

VXNET 12

Product description

The VXNET 12 is a complete installation solution that combines the extraordinary sonic advantages of Tannoy's Dual Concentric™ point-source driver in the same cabinet with integrated digital signal processing, Class D amplifier technologies and robust network control. Together with other models in the VXNET Series, the VXNET 12 affords unprecedented flexibility and scalability across the full range of installed sound applications, including commercial and hospitality, bars and nightclubs, and other small performance spaces.

The VXNET 12 is built around a single 300 mm (12") Dual Concentric driver mounted in a compact, rugged birch plywood cabinet. The latest high power-handling version of Tannoy's exclusive point source, constant directivity Dual Concentric technology ensures high power output with exceptional efficiency together with exceptionally smooth beamwidth characteristics for even coverage at all frequencies. The symmetrical dispersion characteristics allow vertical or horizontal mounting of single cabinets or multi-cabinet arrays without compromising sound quality.

For greater ease in system configuration, as well as precise performance optimisation, all VXNET models incorporate a VNET™ amplifier, DSP and network control module. The integrated VNET concept encompasses intuitive setup software, integrated processing, tuning control, remote performance diagnostics and system protection, together providing a high-performance solution that's easy to install and commission.

To enable quick network set-up, VNET modules are interconnected using rugged Neutrik etherCON™ connectors which are compatible with standard RJ45 connectors and Cat-5 type cable. Each VXNET loudspeaker has a unique address for auto-location on the network, and the VNET network supports free topology so VXNET loudspeakers can be arranged in daisy-chain or star configurations, or a combination of both. System commissioning and venue network control – including real-time diagnostics of the drive unit – are managed by the VNET Windows-based software program. Using a standard LAN-to-serial bridge, wireless network control is accommodated via a WiFi-enabled laptop computer.

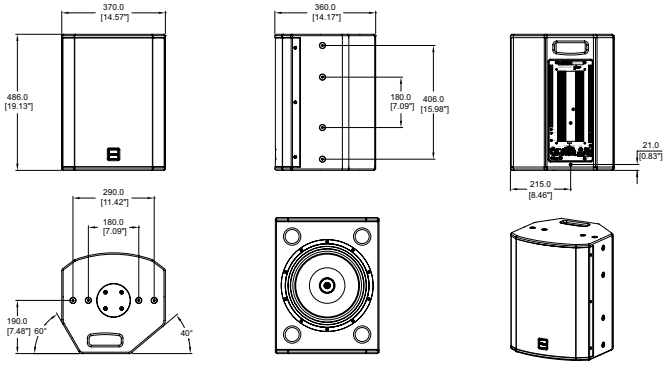
The VXNET 12 cabinet, featuring aesthetically profiled edges and an Airnet™-backed and powder-coated steel grille, is available in standard black or white textured finishes with custom-matched RAL colours as an option. The extensive range of mounting hardware options includes eyebolt location points, a yoke bracket for wall or ceiling location, and a VTH top-hat for pole mounting. For absolute security and installers' peace of mind, all hardware has been tested and certified to guarantee greater than 5:1 safety ratio.

Features

- 300 mm (12") Dual Concentric full-range driver
- Tightly controlled 90 degree dispersion for optimum coverage and forward gain
- Peak output 127 dB SPL @ 1 m
- Integrated VNET module with network control, DSP and Class D amplifier
- Versatile mounting via optional custom hardware
- Integrip™ ergonomic handles on top and bottom of cabinet
- Pole-mountable for optimum portability
- Rugged birch plywood enclosure
- Available in black or white textured paint finish – custom colours optional
- Engineered and built in UK

VNET Network

The Tannoy VNET network provides a robust and flexible means for controlling and monitoring VXNET Series loudspeakers. VNET's robust RS485 interface transmits and receives serial data over a twisted pair to a high number of nodes over very long distances. VNET also operates as a shared bus system, allowing a single computer to control any node on that bus and gather status information from any of the devices. To ensure that any network fault will not affect audio operation, only data to control setup functions and ongoing system diagnostics is carried over the network. Each VXNET loudspeaker controls its own DSP functions, so any unforeseen problem would be isolated to that particular node and audio would not be affected. During setup, speakers are automatically identified on the software set-up screen with factory default names. Names can be edited to reflect their actual location on the network, with physical location confirmed by a 'Flash' LED on the front of the loudspeaker.



Applications

- Night club or bar system
- Transportation hubs
- Performing arts spaces
- Live sound reinforcement
- Sports arenas
- Visitor attractions
- High output retail (eg. fashion stores)
- Portable AV/PA
- Multimedia installations (eg. museums, galleries)
- Theme parks
- Auditoria
- Movie theatres
- Houses of Worship

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Technical Data Sheet
Specifications

VXNET 12

Performance

System type	Full Range - Vented
Frequency response (-3 dB) [1]	70 Hz - 25 kHz
Frequency range (-10 dB) [1]	55 Hz - 38 kHz
Rated maximum SPL [2]	
Average	121 dB
Peak	127 dB
Dispersion (-6 dB)	90 degrees conical
Driver Complement	1 x 300 mm (12") Dual Concentric
Crossover (DSP Generated)	1.5 kHz and variable high pass filter for use with subwoofers
Directivity Factor (Q)	9.6 averaged 1 kHz to 8 kHz
Directivity Factor (DI)	9.8 averaged 1 kHz to 8 kHz

Distortion

10% full power (12.7 V)		**Harmonics**	
		2nd	**3rd**
	250 Hz	0.52%	0.58%
	1 kHz	2.98%	0.63%
	10 kHz	3.58%	0.19%
1% full power (4 V)			
	250 Hz	0.14%	0.26%
	1 kHz	0.38%	0.58%
	10 kHz	1.02%	0.03%

Construction

Enclosure	36.4 litres, 15 mm (enclosure) and 18 mm (front) birch plywood, vented and internally braced
Finish	Textured black or white paint (custom colours on request)
	Powder coated steel grille with airnet cloth behind
Connectors	1 x female XLR (input) 1 x male XLR (link) 1 x RJ45 (network in) 1 x RJA5 (network link) 1 x Neutrik Powercon
Controls & Indicators	LED on front of cabinet behind grille (wink indicator for locating & assigning) Power LED (blue) Signal LED (green) Limit LED (red) User DSP - defeat switch Power Switch
Fittings	8 x M10 Flying inserts (portrait or landscaping mounting) 8 x M10 Yoke Bracket Inserts, 1 x Integrip carrying handle, Blanking plate for optional VTH pole mount
Dimensions	H: 486 mm (19.13") W: 370 mm (14.57") D: 360 mm (14.17")
Weight	17 kg (37.44 lbs)

Electronics

Efficiency	> 85% typically
Damping Factor	120 ref 8 Ω
Distortion	< 0.05% @ 1 kHz -3 dB output (22 kHz handwidth)
Input Impedance	5.6 k Ω unbalanced, 11.2 k Ω balanced
Input Sensitivity	1.4 V (+5.5 dBu)
System Type	Dual channel Class D (Bridged)

DSP system

Comms Facilities	Firmware updatable and selected parameters editable
Communications	Serial - RS485 Proprietary message format
Dynamic Range	112 dB (A) typical
DSP	3rd generation SHARC
Sampling Frequency	96 kHz 24 bit A/D - D/A word length
Format	1 IN = 2 OUT

PSU Specifications

Input Connector	Locking Neutrik Powercon
Voltage Selection	Automatic (115 / 230 V, 45 - 65 Hz)
Type	High current, high freq. switch-mode
Efficiency	> 90% typical
Input voltage	100 V / 115 V / 230 V nominal +/- 10%
Mains fuse	External
Fuse type	T10AT
Other features	Automatic soft-start

Notes:

1. Average over stated bandwidth, measured at 1 metre on axis.
2. Unweighted pink noise input, measured at 1 metre in an anechoic chamber.

A full range of measurements, performance data, and Ease™ Data can be downloaded from www.tannoypro.com

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods may introduce variations in actual performance; however, actual performance always will equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

Ordering Information	
Part Number	**Colour**
8001 7050	**Black**
8001 7051	**White**

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