RCF XPS 16K

RCF (booth C9535 and demo room N101) is displaying its XPS 16K high-power four-channel amplifier with advanced DSP processing at InfoComm 2024. Suited for both touring and installed sound systems, the XPS 16K and XPS 16KD (with Dante) pack a powerful and expansively featured multi-channel audio DSP engine and a multi-channel Class-D amplifier delivering 4 x 4000 W of continuous power at 2.7 ohms, all in a compact 2U chassis with best-in-class signal-to-noise, distortion and dynamic range specifications.

It’s not enough to say that XPS series amplifiers have presets for RCF passive speakers, including the flagship TT+ AUDIO GTX series, but rather that the processors have a highly detailed familiarity with all characteristics of each RCF high-performance component and deliver optimal signal management for sonic performance and system protection. High-pass filters and their artifacts are replaced by Bass Motion Control – an advanced forward-thinking approach to woofer excursion management. BASS Shaper, Air Compensation and Mid-Low Correction algorithms extend LF management. FiRPHASE, a proprietary and advanced digital FiR technology conceived to deliver transparent sound, absolute clarity, and perfect imaging to the listener, provides a coherent distribution of sound for all listeners without phase distortions, ensuring minimum latencies in the system. And that just scratches the surface of the traditional and proprietary processing capabilities delivered by two 40-bit floating-point SHARC chips running at 96 kHz PCM rate.

Each output features 4000 ms of output delay (1372 m / 4501 ft) plus a broad palette of EQ and dynamics processing. A host of advanced algorithms expand the sonic flexibility of the amp, which can be used in linear mode with advanced tuning capabilities. A pair of 32-bit / 96 kHz DSP chips manages internal routing of four XLR inputs (four analog or two analog plus four AES/EBU digital channels) and the optional Dante I/O.

Designed with a multi-faceted fault-tolerant architecture, the XPS 16K’s closed-loop digital protection includes RMS signal protection to protect transducers from thermal issues, power supply output dynamic limiting and overvoltage protection,

peak overvoltage and RMS overcurrent short circuit protection plus gain modulation for thermal protection. Hardware protections include current- and voltage-based protection, monitored speaker impedance measurement and forced air convection heat dissipation utilizing speed-controlled fans.

Local control of the XPS 16K is handled via a large 4.3-inch TFT color capacitive touch front-panel display that provides full operational control of the amplifier. The user interface is intuitive and user-friendly, featuring large-area touch buttons and a convenient edit knob. The high-contrast menus are designed to remain clear and unambiguous, even in very bright or sunny conditions.

Further, the XPS 16K amplifiers feature RCF's RDNet-OE (Over Ethernet), which represents the latest advancement in RDNet networked management for RCF-compatible products. RDNet will detect any new devices on the network, take immediate control, and provide monitoring from a remote computer. Each XPS unit features four Ethernet ports on the rear panel, simplifying integration into any existing Ethernet infrastructure – including Dante on the D model. Multiple XPS 16K units can be interconnected, connected to other RDNet-compatible devices, or linked to computers running RDNet software, all without needing an external RCF CONTROL device. All four LAN ports connect to the internal 1Gb/s switch, ensuring seamless network convergence.

The XPS 16K supports and enables the RCF philosophy of a power-agnostic approach where integrators and system designers have complete flexibility in choosing powered speaker modules (with the XPS 16K providing processing) or an externally amplified approach (where the XPS 16K delivers both processing and amplification, balancing portability, weight, ease and speed of installation and cabling considerations). The XPS 16K delivers rider-friendly premium sound for the most demanding live events or installed applications at a price that belies its capabilities.

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