

Lab.gruppen PLM 20K44 SP 20000 Watt Amplifier with 4 Flexible Output Channels on SpeakON Connectors/LAKE Digital Signal Processing

The PLM 20K44 Combines a 4-In, 4-Out Configuration With Industry-Standard Dante Networking, Setting The Benchmark For Powered Loudspeaker Management System.

The PLM 20K44 is the natural successor of the proven, road tested, and trusted LAB GRUPPEN touring foundation exemplified by the iconic PLM 20000Q. Now offering an extended 4-in, 4-out configuration together with twice the processing power via the latest version 6.3 Lake Controller release, plus industry-standard Dante® networking, the PLM 20K44 sets the benchmark for Powered Loudspeaker Management Systems.

The PLM 20K44 combines four channels of extremely powerful amplification with unrivalled signal processing and audio management. At the core of the system concept is the total integration of all devices – including networking, audio I/O, signal processing, amplifiers, power supply and connected mains supply – allowing complete control and monitoring of the entire platform, resulting in unique operational benefits.

The Power of LAKE Processing

The PLM 20K44 features the legendary power of exclusive LAKE Processing algorithms, incorporating four full-featured LAKE modules with four discrete channels of audio throughput input to output. Audio signals are selectable from four channels of analog (with Iso-Float ground isolation), four channels via AES3 digital inputs and eight dual redundant Dante networked digital inputs. Input signals are individually selectable for each channel, with programmable failover to a lower prioritized input.

The full-featured, on-board LAKE Processor includes group control with Raised Cosine MESA EQ asymmetric filters to match the responses of any loudspeaker system. LimiterMax peak and RMS limiters set the industry standard for loudspeaker protection and sonic transparency. The included LAKE Controller software provides a unified interface for control of Lake functions and for comprehensive monitoring of both amplifier status and connected loudspeaker loads. Optimized for a wireless tablet PC, LAKE Controller is easy and intuitive to operate, with the “feel” of real-time analog faders and controls. Lake Controller also features seamless integration with third party, real-time sound system measurement, optimization, and control software packages. Users can measure spectrum and transfer function and adjust system EQ at the same time, using the same user interface.

LAKE Processing offers classical crossovers (selectable up to 48 dB per octave) as well as linear-phase crossovers capable of slopes exceeding 180 dB per octave for greater control to limit lobing and off-axis cancellation.

CAFÉ for Green Credentials

CAFÉ (Configuring Amplifiers For the Environment) is a software suite that allows the PLM 20K44 to be easily configured and monitored in the most efficient manner possible. In addition to providing comprehensive system surveillance and configuration of amplifier features such as ISVPL and Breaker Emulation Limiter (BEL), CAFÉ also includes valuable help to save the environment. CAFÉ can accurately predict estimations of average mains current draw and generated heat, and utilizing the PLM+ Series’ innovative power supply technologies in combination with BEL the mains draw can be safeguarded to a predicted level. The end result is precise mains management and thermal control, which allows more accurate provision of mains distribution, cabling and cooling. CAFÉ reduces lifetime running costs and minimizes environmental impact, and also reduces demands on UPS systems.

In addition CAFÉ also features Equipment Specification Predictor (ESP): an innovative design aid that examines the system SPL and speaker requirements and transforms that data into circuit and amplifier channel requirements. On a system level, CAFÉ supplies a recommendation for optimized placement of channels into amplifiers for the most cost effective solution, including quantities of PLM+ series models for the most rational equipment, thereby minimizing wasted headroom.

Allocate Power Where It Is Needed

RPM Provides ultimate flexibility of power output allocation across channels to match specific load requirements, enabling more efficient use of amplifier inventory

More is More: Power, Performance, and Processing

PLM+ offers unprecedented levels of refined performance, double the processing power, and even better overall efficiency – proven, tested and trusted.

CAFÉ with ESP: Configuration, Control, and Monitoring

LAB GRUPPEN’s dedicated integrated software provides comprehensive system surveillance, reducing running costs and minimising environmental impact.

Features:

- 20,000 Watt amplifier with 4 flexible output channels and up to 5,900 Watts channel output for touring applications
- LAKE digital signal processing for unparalleled loudspeaker management and system control
- Integrated 8x8 channels of dual redundant Dante* digital audio networking with AES67 support
- 4 x 4,400 Watts into 2 Ohms, 4 x 5,000 Watts into 2.67 Ohms, 4 x 4,400 Watts into 4 Ohms, 4 x 2,300 Watts into 8 Ohms, 4 x 1,150 Watts into 16 Ohms, 4 x 3,300 Watts into Hi-Z 70 V, 4 x 4700 Watts into Hi-Z 100 V
- Proven and reliable Class-TD output stage with proprietary Intercooler high-efficiency cooling system
- Rational Power Management (RPM) provides total flexibility to allocate available power across all 4 output channels

- Best-in-class Power Factor Correction (PFC) with Current Draw Modelling reduces running costs and minimizes environmental impact
- Under-Voltage Limiting (UVL) for continued operation during severe mains supply voltage drops
- Dedicated on-board surveillance and load monitoring for complete peace of mind
- Redundant audio inputs and on-board system surveillance for full system security
- Backlit, white-on-black front panel display and menu navigation buttons
- 100 user presets for simple and efficient system configuration and set-up
- 3 front-to-rear airflow fans with temperature control for optimal speed and reduced noise
- 4 "LAKE Class" analog input channels with Iso-Float ground isolation
- 4 input channels of AES/EBU (AES3) digital audio supporting all standard sample rates up to 192 kHz with 24-bit resolution
- 2 Neutrik etherCON* RJ-45 ports provide dual redundant Dante interfaces and remote configuration via LAKE Controller and Dante Controller software
- Balanced analog and AES/EBU audio inputs on Neutrik* XLR connectors
- 1 NLT8 and 2 NLT4 Neutrik speakON* output connectors
- Detachable Neutrik powerCON* cable rated at 250 V / 32 A
- Removable dust filter grilles for increased air circulation
- Rugged 2U rackmount chassis for durability in touring applications
- 10-Year Warranty Program*
- Designed and engineered in Sweden