

**Features**

- >5000 w/ch @ 2.2-3.3 ohms
- 4400 w/ch @ 4 ohms
- 2u chassis only 17kg
- Class TD output stage
- Universal regulated switchmode power supply
- Power factor correction
- Copper-finned inter-cooler
- LoadSmart™ load verification
- SpeakerSafe™ continuous performance monitoring
- Dante digital network
- Digitally controlled 'amplifier gain'
- Digital output attenuation
- Speakon outputs
- Digitally implemented Inter-Sample Voltage Peak Limiting
- Power Average Limiter
- Software controlled Breaker Emulation Limiter
- High brightness front panel LCD display
- Moisture-resistant silicon front panel touchpad

**Applications**

- Concert touring
- Regional touring
- Permanent installations

# 20000DP powered loudspeaker management



**The 20000DP is a high power four channel powered loudspeaker management system designed as part of the Flashline large format line array integrated loudspeaker system.**

The 20000DP seamlessly integrates an extraordinarily powerful four-channel amplifier platform with Lake® Processing, Dante networked signal distribution, accurate load verification and real-time performance monitoring, housed in a 2U chassis and affording unprecedented power density for even greater utility in all types of sound reinforcement applications.

Engineered as part of a unified system of loudspeakers, amplifiers, rigging hardware and racks, the 20000DP affords significant advantages – in driver optimisation, sonic performance, user functionality, inventory utilization, and long-term cost savings – when compared to conventional approaches using separate components.

By combining enormous power with industry-leading Lake loudspeaker processing, a single 20000DP unit is capable of driving up to three Flashline mid/high cabinets – assigning one frequency band per channel – or up to six Flashline subwoofers.

The 20000DP incorporates several new developments to maintain rated performance even with extreme program demands or under marginal operating conditions. A new universal power supply with power factor correction (PFC) allows extended bursts without sagging rails; extreme low frequency beats will not affect mid- and high-frequency headroom. Also, with a differentiated load on the four outputs, a higher wattage can be delivered to the more heavily loaded channel while peak voltage remains accessible on all channels. In addition, new limiter profiles result in improved subjective performance when the desire for increased SPL exceeds allowable limits.

Finally, to assure uninterrupted service when pushed to extremes, the 20000DP employs the proprietary Breaker Emulation Limiter (BEL™) to prevent tripping of mains breakers, along with advanced peak limiting circuits that keep the output devices inside operating tolerances and below the thermal protection threshold. When confronted with sagging mains voltage, Under-Voltage Limiting (UVL™) allows continued operation even when mains supply is as low as 65 V.

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# 20000DP powered loudspeaker management

<b>NUMBER OF INPUT CHANNELS</b>	2
<b>NUMBER OF OUTPUT CHANNELS</b>	4
<b>PEAK TOTAL OUTPUT</b>	20000W
<b>MAX PEAK OUTPUT VOLTAGE</b>	194V
<b>MAX OUTPUT CURRENT</b>	67A peak
<b>MAX OUTPUT POWER</b>	4800 watts into 2 ohms 4400 watts into 4 ohms 2300 watts into 8 ohms 1150 watts into 16 ohms
<b>THD + NOISE</b>	<0.05% 20Hz - 20kHz for 1W <0.04% @ 1kHz and 1dB below clipping
<b>DYNAMIC RANGE</b>	>114dB with digital inputs (for all supported sample rates) >110dB with analog inputs
<b>FREQUENCY RESPONSE</b>	±0.05db (1W into 8 ohms, 20Hz - 20kHz)
<b>CMRR</b>	>74dB, 20Hz - 20kHz
<b>SAMPLE RATE CONVERTERS</b>	
<b>THD + NOISE</b>	0.00003%, 20Hz - 20kHz, unweighted
<b>ANALOG TO DIGITAL INPUTS</b>	2 inputs x 2 link
<b>INPUT SENSITIVITY RANGE</b>	+12 or +26dBu
<b>THD + NOISE</b>	0.00022% typical at 1kHz unweighted at +26dBu headroom setting 0.00033% typical at 20Hz and 20kHz unweighted at +26dBu headroom setting
<b>AES / EBU INPUTS</b>	2 inputs x 2 link
<b>SUPPORTED RESOLUTIONS</b>	> 24 bit
<b>SUPPORTED SAMPLE RATES</b>	44.1, 48, 88.2, 96, 176.4, 192 kHz
<b>DANTE AUDIO NETWORK</b>	
<b>INPUTS AND OUTPUTS</b>	2 inputs, 2 outputs
<b>SUPPORTED SAMPLE RATES</b>	48, 96kHz
<b>DEVICE PRESETS</b>	
<b>LOCAL MEMORY LOCATIONS</b>	100
<b>LIMITERS</b>	
<b>ADJUSTABLE INTER-SAMPLE</b>	
<b>VOLTAGE PEAK LIMITER</b>	17.8 - 194V, step size 0.1V
<b>CURRENT PEAK LIMITER &lt;300ms</b>	67A peak
<b>CURRENT AVERAGE LIMITER (CAL) &gt;300ms</b>	33A rms
<b>LIMITER MAX (rms and peak limiters)</b>	
<b>MAX RMS (rms voltage limiter)</b>	Yes
<b>MAX PEAK (peak voltage limiter)</b>	Yes
<b>AMPLIFIER GAIN</b>	22 - 44dB, step size 0.1dB
<b>ANALOG ATTENUATOR</b>	-Inf to 0dB, step size 0.25dB
<b>REAR PANEL INTERFACE</b>	
<b>AES / EBU / I/O (input + link)</b>	2 x 3-pin XLR
<b>ANALOG, 2-CHANNEL I/O (input + link)</b>	4 x 3-pin XLR, electronically balanced
<b>OUTPUT CONNECTORS</b>	Neutrik speakON (1 x NLT8, 2 x NLT4)
<b>AUTO 10/100, AUTO UPLINK</b>	2 x RJ45 etherCON
<b>CONTROL AND MONITORING INTERFACE</b>	Via Ethernet for Lake Controller software, or DLM
<b>DETACHABLE MAINS CORD</b>	Neutrik powerCON 32A
<b>COOLING</b>	Three fans front to rear airflow, temperature controlled speed
<b>OPERATING VOLTAGE (45 - 66Hz)</b>	Universal power supply 70 V - 265 V
<b>POWER FACTOR CORRECTION (PFC)</b>	Yes
<b>BREAKER EMULATION LIMITER (BEL)</b>	Yes, selectable breaker profile
<b>DIMENSIONS (W X H X D)</b>	483mm x 88mm x 424mm (19' x 3.5" (2U) x 16.7")
<b>WEIGHT</b>	17kg (37lbs)
<b>APPROVALS</b>	CE, ANSI/UL 60065 (ETL), CSA C22.2 NO. 60065, FCC
<b>MORE INFO</b>	More information can be found on our website: <a href="http://www.turbosound.com">www.turbosound.com</a>