

C 16:4



- ▶ **Unprecedented power density** - Total output of 1600 W (4 ohms) in a 2U cabinet
- ▶ **Four channels** – All channels bridgeable for 2 or 3 channel configurations
- ▶ **Lo-Z or Hi-Z (70 V / 100 V)** - Selectable per channel, normal or bridged
- ▶ **Patented Class TD amplifier topology**
- ▶ **Voltage Peak Limiter (VPL)** – Configurable per channel to optimize each output for connected loads
- ▶ **Phoenix-type input connectors**
- ▶ **Screw terminal output connectors**
- ▶ **Comprehensive protection and warning** - Excessive output current, DC, temperature, very high frequency (VHF), short circuit, open load, mains fuse protection, and soft start
- ▶ **Efficient and uniform Intercooler® cooling**
- ▶ **NomadLink® network ready**

An Installation Amplifier without Compromise

Installed or on tour, uncompromising quality begins with superior sound. Over the past decade, the sound of Lab.gruppen amplifiers has earned praise from renowned FOH engineers and owners of the world’s premier sound rental companies. At the core of Lab.gruppen’s tight and transparent sound is patented Class TD technology. As a proprietary implementation of tracking class D, Class TD approaches the exceptional efficiency of class D while retaining the superior sonic quality of the best class AB output stages. All C Series models incorporate Class TD amplifiers.

A Regulated Switch Mode Power Supply (R.SMPS) contributes to the remarkable efficiency of the C Series, while at the same time providing stable operation even with wide fluctuations in mains voltage. R.SMPS also works in conjunction with Class TD to give extraordinary power density. More channels with more power are condensed into a smaller package, allowing C Series amplifiers to minimize rack space requirements and reduce installation costs.

Extreme power density demands efficient cooling, and here Lab.gruppen’s Intercooler® proves remarkably effective. Thousands of small copper cooling fins dissipate heat, and all output devices are mounted on one row perpendicular to airflow for uniform cooling.

C Series amplifiers are uniquely capable of adapting to a wide variety of demanding load conditions. Each channel has an individually configurable Voltage Peak Limiter (VPL), which allows

the output to be optimized for any loudspeaker load – whether one massive subwoofer or a series of small 100 V loudspeakers. VPL works in combination with adjustable input gain to achieve maximum headroom regardless of input levels or output impedances.

To assure reliability, and minimize service interruptions, C Series amplifiers offer comprehensive warning and protection features. Whenever faulty wiring, improper use, or extreme ambient temperatures threaten trouble, a C Series amplifier gives clear and accurate warning indications. Protection measures are inserted only when dangerous thresholds are passed. Conditions are re-checked at six-second intervals, and normal operation resumes when measurements return to nominal.

Every C Series is ready for the NomadLink® network right out of the box. With NomadLink®, key amplifier parameters are displayed via DeviceControl PC software, and remote control of channel mutes and power on/off is under network control. (NomadLink® requires the separate NLB 60E network bridge.)

Applications:

- ▶ **Stadiums and Arenas**
- ▶ **Theme Parks**
- ▶ **Theaters**
- ▶ **Houses of Worship**
- ▶ **Clubs**
- ▶ **Performing Arts Centers**
- ▶ **Cruise Ships**
- ▶ **Auditoriums**



Specifications C 16:4

General					
Number of channels per amplifier	4				
Max. total output all channels driven	1600 W				
Max. output voltage per channel	100 V _{rms}				
Max. output current per channel	8.5 A _{rms}				
Max. Output Power	16 ohms	8 ohms	4 ohms	2 ohms	Hi-Z: 70 V / 100 V
Per ch.	400 W	400 W	300 W	n.r.	400 W
Bridged per ch.	800 W	600 W	n.r.	n.r.	800 W
Performance with Gain: 35dB and VPL: 141V					
THD 20 Hz - 20kHz for 1W	0,1%				
THD at 1kHz and 1dB below clipping	0,05%				
Signal To Noise Ratio	112 dBA				
Channel separation (Crosstalk) at 1kHz	70 dB				
Frequency response (1 W into 8 Ohm) +0/-3dB	6.8 Hz - 34 kHz				
Voltage Peak Limiter (VPL), max. peak output					
VPL, selectable per ch. (V) ³⁾	141, 118, 100, 85, 71, 59, 50, 42 V				
VPL, when bridged (V) ^{3) 1)}	282, 236, 200, 170, 142, 118, 100, 84 V				
Voltage Peak Limiter mode (per ch.)	Hard / Soft				
Gain and Level					
Amplifier gain selectable (all channels) ¹⁾	Rear panel switches: 23, 26, 29, 32, 35, 38, 41, 44 dB				
Default gain	35dB				
Level adjustment (per ch.)	Front panel pot, 21 position detent -inf to 0 dB, hidden behind security panel/dust filter grille.				
General					
Input connectors (per ch.)	3-pin Phoenix, electronically balanced				
Output connectors (per ch.)	Barrier strip 2-pole screw terminals				
Output bridge mode	A+B and/or C+D, inputs A and C are signal source				
NomadLink® network	On board, 2 x RJ45 EtherCon connectors, IN and OUT				
Intelligent fans (on/off)	Depending on presence of output signal				
Power on/off and Remote enable on/off	Individual switches on front panel				
Cooling	Two fans, front to back airflow, temperature controlled speed				
Front panel indicators:					
Common	NomadLink® Network; Power Average Limiter (PAL™) ²⁾ ; Power on				
Per channel	Signal present / High impedance; -10 dB and -4 dB output signal; Voltage Peak Limiter (VPL); Current Peak Limiter (CPL): Very High Frequency (VHF); High temperature; Fault; Mute				
Power					
Operating voltage, 230 V / 115 V nominal ⁴⁾	130-265 V / 65-135 V				
Minimum power-up voltage, 230 V / 115 V	171 V / 85 V				
Power Average Limiter (PAL™) ²⁾	Yes				
Soft start / Inrush Current Draw	Yes / max. 5A				
Dimensions (W/H/D)					
Weight	W: 483 mm (19"), H: 88 mm (2 U), D: 343 mm (13.5")				
Finish	12 kg (26.4 lbs.)				
Approvals	Black painted steel chassis with gray painted steel front				
Mains plug type	CE, ANSI/UL 60065 (ETL), CSA C22.2 NO. 60065, FCC				
	230 V CE: 16 A, CEE7; 115 V ETL: 15 A / 5-15P				

Note 1): Automatic -6 dB gain compensation when bridging channels. Ch.'s A+B and/or C+D can be bridged individually.

Note 2): PAL™ can reduce the maximum output power to keep the power supply operating safely, and/or to prevent excessive current draw tripping the mains breaker. Refer to operation manual.

Note 3): For sine waves, peak voltage output values translate to V_{rms} with the formula $V/1.41 = V_{rms}$. E.g. 141V peak equals 100V_{rms} and 100V peak equals app. 70V_{rms}. Hence, outputs can be set for high impedance loads without requiring a transformer.

Note 4): Separate 230 V or 115 V versions available. Not selectable on the amplifier.

LAB.GRUPPEN
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