

# FP 7000



- ▶ **Unprecedented power density** – The FP 7000 delivers a total of 7000 W (2 x 3500 W @ 2 ohms) in only 2U.
- ▶ **Lab.gruppen sound quality** – FP 7000 amplifiers maintain the impeccable sonic performance standards set by the original fP Series, with the same durability and even greater efficiency.
- ▶ **NomadLink® network ready** – Monitoring and control of key functions accessible via the intuitive DeviceControl software and the robust, daisy-chained NomadLink network, as well as by the leading third party control platforms.
- ▶ **Patented Class TD® amplifier topology** – Road-proven output stage delivers Class B audio quality with Class D efficiency.
- ▶ **Regulated Switch Mode Power Supply (R.SMPS™)** – Output power remains constant even with significant drops in the mains voltage.
- ▶ **Efficient cooling system** – Unique, lightweight Intercooler® copper cooling system dissipates more heat to allow extended peak output.
- ▶ **Adjustable parameters** – Selectable Gain, scalable Voltage Peak Limiter (VPL™), and bridge-mode operation allow custom configuration for any system or application.
- ▶ **XLR input and link connectors**
- ▶ **Heavy-duty binding post or speakON® output connectors**
- ▶ **Comprehensive protection and warning** – Excessive output current, DC, high temperature, very high frequency (VHF), short circuit, open load, mains fuse protection, and soft start.

## A Benchmark For Touring Amplification

Over the past decade, the tight and transparent sound of Lab.gruppen touring amplifiers has earned the praise of renowned FOH engineers and leading sound rental companies worldwide. FP 7000, one of four models in the FP+ Series, continues this tradition. At the core of the FP 7000's performance is the patented Class TD output stage, a breakthrough amplifier topology that approaches the exceptional efficiency of Class D while retaining the sonic purity of proven Class B designs. Further contributing to the remarkable efficiency of the FP 7000 is a Regulated Switch Mode Power Supply (R.SMPS), which gives the added benefit of stabilizing rail voltages to the output even with wide fluctuations of mains voltage. A highly refined and updated circuit layout optimizes the interaction of R.SMPS and Class TD to produce the extraordinary power density of the FP 7000.

To keep its cool under extreme demands, the FP 7000 relies on Lab.gruppen's proprietary Intercooler. This innovation uses thousands of copper fins to multiply the exposed heatsink surface's rapid heat dissipation. Also, all output devices are mounted transverse to the airflow for uniform cooling. As a result, the FP 7000 delivers Lab.gruppen's trademark "all the power, all the time" with no degradation of sonic performance.

To maximize headroom in any application, the FP 7000 offers adjustable input gain along with Lab.gruppen's exclusive Voltage Peak Limiter (VPL). Adjustable on a per-channel basis, VPL optimizes the output for any load, from a single massive subwoofer to a series of HF compression drivers.

The comprehensive warning and protection features on the FP 7000 safeguard output circuits and connected loads while also extending amplifier life and minimizing the chance of service interruptions. Whether it's a matter of faulty wiring, improper use, or extreme ambient temperatures, the FP 7000 gives clear indication of any problems. Automatic protection measures engage only at critical thresholds. Operating conditions are re-checked every six seconds and, if a fault is detected, normal operation is resumed when measurements return to nominal.

The FP 7000 is shipped with a NomadLink network interface as standard. In conjunction with DeviceControl software, or the leading third party control platforms, NomadLink network allows monitoring of all key amplifier parameters and remote control of power on/off, channel mutes, and channel solo functions. (NomadLink requires the separate NLB 60E NomadLink Bridge & Network Controller).



## Specifications FP 7000

### General

|  |           |
|--|-----------|
| Number of channels                     | 2         |
| Peak total output both channels driven | 7000 W    |
| Peak output voltage per channel        | 155 V     |
| Max. output current per channel        | 59 A peak |

| Max. Output Power           | 2 ohms | 4 ohms | 8 ohms | 16 ohms |
|-----------------------------|--------|--------|--------|---------|
| Per ch. (both ch.'s driven) | 3500 W | 2800 W | 1450 W | 730 W   |
| Bridged per ch.             | 3)     | 7000 W | 5600 W | 2900 W  |

### Performance with Gain: 35 dB and VPL: 155 V

|   |                         |
|---|-------------------------|
| THD 20 Hz - 20 kHz for 1 W                    | <0.1%                   |
| THD at 1 kHz and 1 dB below clipping          | <0.05%                  |
| Signal To Noise Ratio                         | >112 dBA                |
| Channel separation (Crosstalk) at 1 kHz       | >70 dB                  |
| Frequency response (1 W into 8 ohms) +0/-3 dB | 6.8 Hz - 34 kHz         |
| Input impedance                               | 20 kOhm                 |
| Common Mode Rejection (CMR)                   | >54 dB, 20 Hz to 20 kHz |
| Output impedance @ 100 Hz                     | 19 mOhm                 |

### Voltage Peak Limiter (VPL), max. peak output

|  |  |
|--|--|
| VPL, selectable per ch.                    | 155, 121, 101, 83, 70, 56, 47, 38 V    |
| VPL, selectable when bridged <sup>1)</sup> | 310, 242, 202, 166, 140, 112, 94, 76 V |
| Voltage Peak Limiter mode (per ch.)        | Hard / Soft                            |

### Gain and Level

|   |   |
|---|---|
| Amplifier gain selectable (all channels) <sup>1)</sup><br>– rear-panel switches | 23, 26, 29, 32, 35, 38, 41, 44 dB                                 |
| Default gain  | 35 dB   |
| Level adjustment (per ch.)  | Front-panel potentiometer, 31 position detented from -inf to 0 dB |

### Connectors and Switches

|                                       |  |
|---------------------------------------|--|
| Input connectors (per ch.)            | 3-pin XLR, electronically balanced                               |
| Output connectors (per ch.)           | Neutrik speakON® or Binding Posts (must be specified upon order) |
| Output bridge mode per two ch.'s      | A+B - Ch. A is signal input source                               |
| NomadLink network                     | On board, 2 x RJ45 etherCON® connectors, IN and OUT              |
| Intelligent fans (on/off)             | Yes, depending on presence of output signal                      |
| Power on/off and Remote enable on/off | Individual switches on front-panel                               |
| Cooling                               | Two fans, front-to-rear airflow, temperature controlled speed    |

### Front-panel indicators:

|             |  |
|-------------|--|
| Common      | NomadLink network; Power Average Limiter (PAL) <sup>2)</sup> ; Power on  |
| Per channel | Signal present / High-impedance; -20 dB, -15 dB, -10 dB and -4 dB output signal;<br>Voltage Peak Limiter (VPL); Current Peak Limiter (CPL); Very High Frequency (VHF); High temperature; Fault; Mute |

### Power

|  |  |
|--|--|
| Operating voltage, 230 V / 115 V nominal <sup>4)</sup> | 130-265 V / 65-135 V                             |
| Minimum power-up voltage, 230 V / 115 V                | 171 V / 85 V                                     |
| Power Average Limiter (PAL) <sup>2)</sup>              | Yes  |
| Soft start / Inrush Current Draw                       | Yes / max. 5 A                                   |
| Mains connector  | 230 V CE: 16 A, CEE7; 115 V ETL: 30 A Twist lock |

### Dimensions

W: 483 mm (19"), H: 88 mm (2 U), Overall D: 396 mm (15.6"), Mounting D: 358 mm (14.1")

### Weight

12 kg (26.4 lbs.)

### Finish

Black painted steel chassis with black painted steel / aluminum front

### Approvals

CE, ANSI/UL 60065 (ETL), CSA C22.2 NO. 60065, FCC

**Note 1):** Automatic -6 dB gain compensation when bridging channels.

**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 the FP+ Operation Manual section 7.5.8 Power Average Limiter (PAL) for more information.

**Note 3):** Regarding n.r. (not recommended) notes: The amplifier will be fully operational in bridge-mode into 2 ohm and high impedance (Hi-Z) loads, but due to physical constraints in the construction, the max. output power will not be significantly higher than running individual channels and therefore this mode of operation is not recommended.

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

All specifications are subject to change without notice.

Intercooler, NomadLink and Class TD are national and/or international registered trademarks of Lab.gruppen AB. R.SMPS and VPL are trademarks of Lab.gruppen AB. All other trademarks remain the property of their respective owners. Copyright © 2010 Lab.gruppen AB. All rights reserved.

**LAB.GRUPPEN**

LAB.GRUPPEN AB ▶ SWEDEN

INTERNATIONAL CONTACT ▶ INFO@LABGRUPPEN.COM | US & CANADA CONTACT ▶ INFO@TCG-AMERICAS.COM

WWW.LABGRUPPEN.COM

Item no. TDS-FP7000\_V8