

LAB.GRUPPEN



POWER AMPLIFIERS

iP 2100

KEY FEATURES:

2 x 425 watts @ 8 Ω
2 x 700 watts @ 4 Ω
2 x 1050 watts @ 2 Ω
(Measured just below clip level,
with both channels driven)

- ◆ Compact design:
2U high
- ◆ Intercooler® cooling
system with front-to-rear
airflow
- ◆ Multiple positions gain
switch
- ◆ Easily accessible dust filter
- ◆ Improved low-end power
bandwidth
- ◆ Neutrik Combo jack and
Phoenix terminal block
input connectors
- ◆ Bridged mono outputs
in one SpeakOn connector

The iP 2100 is a space-saving power amplifier, ideal for use in installations as well as in cost-effective live sound systems.

The Iron Power (iP) family of power amplifiers is the new compact and versatile line of professional power amplifiers with classic toroidal iron transformers. To achieve a compact design, the latest semiconductor technology is utilized. This, together with Lab.gruppen's proprietary copper cooling system, Intercooler®, enhances the 2 ohms capacity.

A new Bi-phase wiring scheme also increases the capacity of the power supply. This extends the power bandwidth in the low end.

Besides the traditionally superb Lab.gruppen sonic performance, there is a full line of features to make the iP family functional in all situations from installation to cost-effective live sound systems:

Multiple positions Gain switch

To meet the demands for a flexible gain structure in the system, Lab.gruppen offers a multiple position gain switch. The maximum amplifier gain can be set to all industry standards: 20, 23, 26, 29, 32, 35, 38 and 41 dB.

Versatile input connection

With the Neutrik Combo-jack we offer both the professional XLR-type _standard and the semi-pro 1/4" TRS phono-jacks. For installations the 3-pin Phoenix terminal block may be handier.

Soft Start

Toroidal transformers require a huge amount of start current to build up a magnetic flux when the amplifier is switched on. Therefore Lab.gruppen have included a soft start circuit to minimize the risk of blowing the wall fuse and to reduce flickering in the lighting.

Sophisticated protection circuitry, combining:

- **ALStm short circuit protection;** the Adaptive Limiting System permits very high peak currents, but keeps the amplifier within the Safe Operation Area.
- **DC protection;** protects against infrasonic signals
- **VHF protection;** protects the loudspeakers against strong very high frequency non-musical signals above the audible range.
- **Thermal protection;** prevents the amplifier from being overheated. The protection indicators on the front panel are switched on, as a warning, before the protection process is initiated.
- **AC protection;** shuts down the power supply if the line voltage is outside the operating voltage.
- **Clip limiter;** prevents severely clipped waveforms from reaching the loudspeakers, whilst maintaining full peak power.

SPECIFICATIONS iP 2100

MAX OUTPUT POWER ¹⁾

	EIA at 1 kHz and 1% THD	FTC 20-20kHz @0.1%THD
8 Ω per channel	425 W	400 W
4 Ω per channel	700 W	670 W
2 Ω per channel	1050 W ²⁾	980 ²⁾ W
8 Ω bridged	1400 W	1300 W
4 Ω bridged	2100 W ²⁾	1900 ²⁾ W

Max output voltage	
8 ohms load	58 Vrms
Peak voltage, no load	92 V

Distortion etc.	
THD 20Hz-20kHz and 1W to full power	0,05 %
THD @ 1kHz and -1dB under clip	0,005 %
DIM 30 at -3dB under clip	0,005 %

Hum and Noise	<-110 dB
Channel separation @10kHz	70 dB
Output impedance	30 mΩ
Slew Rate	45 V/μs

Inputs	
Gain, selectable [dB]	20, 23, 26, 29, 32, 35, 38, 41
Impedance	20 kohm
Common mode rejection	50 dB

Front Panel		
Gain controls	(2) channel A, B	31 positions detent
Protect indicator	(2) yellow LEDs	80°C at heatsink or >12kHz at full power or shorted output
Clip Indicator	(2) red LEDs	Fast peak – slow release
Signal present indicator	(2) green LEDs	-40 dB below full output
On Indicator	(2) green LEDs	DC rail voltage for channel A and B

Rear Panel	
Input connectors	(2) Neutrik Combo XLR type, 3 pin & 1/4" jack
Input /Link connector	(2) 3-pin Phoenix terminal block
Output connectors	(2) Neutrik 4-pole Speakon connectors
Switches	
Clip limiter A and B	On-Off (switchable)
Link-switch	Ch.A-B

Power	230 V version	115 V version
Operation voltage	130 V-265 V AC	65 V – 135 V AC
Minimum start voltage	190 V	95 V AC
Full output power at 4ohms	230 V AC	115 V AC
Peak inrush current (Soft start limited)	20 A	10 A

Current Draw @ 4ohms&230V		
Quiescent power (no load)	0.8 Arms	1.6 Arms
1/8 of full power (-9dB)	5 Arms	10 Arms
1/3 of full power (-5dB)	8 Arms	16 Arms
At full power (0 dB) @1 kHz 1% THD	13 Arms	26 Arms

Net Dimensions mm (inch)	483 (19") W x 88 (3,5") H x 325 (12,8") D
Shipping Dimensions mm (inch)	560 (22") W x 180 (7,1") H x 500 (19,7") D
Net Weight	18 kg (39,6 lbs)
Shipping Weight	19,6 kg (43 lbs)

Approvals	CE	Emission	EN 55 103-1, E3
		Immunity	EN 55 103-2, E3, with S/N below 1% at normal operation level ⁴⁾
		Safety	EN 60 065, class I
	THX	iP2100T	

1) Specifications measured with 230 VAC 4) Normal operation level 1/8 of full power or -9dB below clip level.

2) Component tolerance dependent

3) Continuous power, one channel driven or peak power both channels driven
(Thermal protection may occur at high continuous power)