

LAB.GRUPPEN



POWER AMPLIFIERS

iP 900

KEY FEATURES:

- 2 x 200 watts @ 8 Ω
- 2 x 320 watts @ 4 Ω
- 2 x 470 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 900 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:

- **ALS™** 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 900

MAX OUTPUT POWER ¹⁾

	EIA at 1 kHz and 1% THD	FTC 20-20kHz @0.1%THD
8 Ω per channel	200 W	90 W
4 Ω per channel	320 W	300 W
2 Ω per channel	470 W ²⁾	400 ²⁾ W
8 Ω bridged	640 W	600 W
4 Ω bridged	900 W ²⁾	800 ²⁾ W

Max output voltage

8 ohms load	39 Vrms
Peak voltage, no load	63 V

Distortion etc.

THD 20Hz-20kHz and 1W to full power	0,02 %
THD @ 1kHz and -1dB under clip	0,005 %
DIM 30 at -3dB under clip	0,008 %

Hum and Noise

Channel separation @10kHz	<-105 dB
Output impedance	70 dB
Slew Rate	30 mΩ
	30 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	180 V	90 V AC
Full output power at 4ohms	230 V AC	115 V AC
Peak inrush current (Soft start limited)	10 A	5 A

Current Draw @ 4ohms&230V

Quiescent power (no load)	0.5 Arms	1 Arms
1/8 of full power (-9dB)	2.3 Arms	4.6 Arms
1/3 of full power (-5dB)	3.7 Arms	7.4 Arms
At full power (0 dB) @1 kHz 1% THD	6.5 Arms	13 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	12.5 kg (27.5 lbs)
Shipping Weight	14.1 kg (31 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

iP900T

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)