

PPA 1200.

General features

The PPA 1200 is a sophisticated, reliable class AB power amplifier with microprocessor control for all functions. Fitted with dual power supplies, it delivers 2 x 600 W in 4 Ω or 2 x 900 W in 2 Ω with superb sonic quality, for an unlimited period. In bridge mode, it delivers 1200 W in 8 Ω or 1800 W in 4 Ω RMS.

A built-in two-way electronic 24 dB/oct. Bessel crossover can be activated to suit Bi-amping of many speaker systems. Crossover frequency is fixed at 1 kHz, which is the optimum for use with SA Compact Drivers. Other frequencies are available on request.

Microprocessor control

For total flexibility, a microprocessor is used to achieve the following:

- Control of all functions like input levels, maximum power, power amp on delay, input ground lift, system ground lift, stand-by and bridge mode.
- Display of values of all relevant internal parameters, like output transistor temperature, average power, peak power, maximum power, power amp on delay, DC on output and overheating. LED indication for signal present, clip and power limit and selected display status.
- Protection of the amplifier and loudspeakers.
- Full remote control of up to 250 PPA 1200 amplifiers through the SAnet, by any PC, fitted with the SAnet card.
- Store and recall PC generated presets of all settings. Presets for SA's loudspeaker systems are already stored in memory.
- Integrated "logging" software enables rental companies to establish exactly when amps have been used, for how long, at what levels, etc.
- A system lock, with programmable lockcode, is added to prevent unauthorised alteration of any setting.

Power Series PPA 1200

In this documentation you will find information about:

- General features
- Microprocessor control
- Dynamic Damping Control™
- Auto Energy Control (AEC™)
- Wiring for DDC™
- PPA 1200 connections
- Specifications

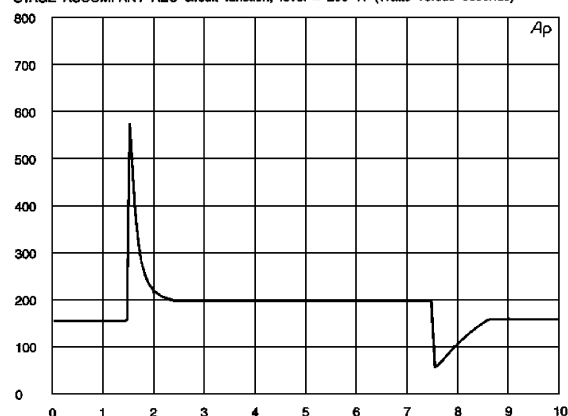
Dynamic Damping Control™

DDC comprises special circuitry that measures the voltage on the loudspeaker terminals by means of extra sensor wiring. These measurements are compared with the amplifier's input signal and, if discrepancies are registered, corrections are made. This ensures that the amplifier has an almost infinite damping, resulting in an exceptionally accurate sound reproduction.

Auto Energy Control (AEC™)

AEC is a very sophisticated protection against clipping, average power overload and peak power overload, designed to maintain the full dynamic range of the program material. The microprocessor continuously measures output voltages and currents of the amplifiers, when limits are exceeded, the input gain is reduced proportionally to the amount of overload. Once the overloading has disappeared, the gain is automatically restored to its original value. Attack and release time depend on the type of overload and are selected to guarantee an inaudible operation.

STAGE ACCOMPANY AEC circuit function, level = 200 W (Watts versus seconds)



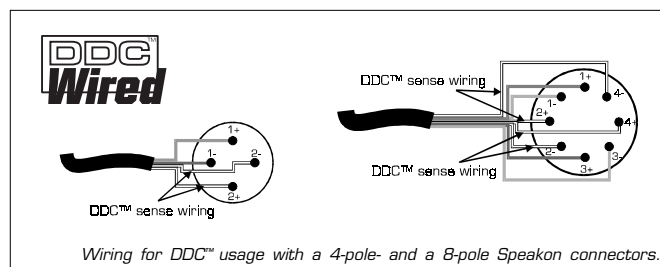
Response of the AEC circuitry. "Maximum Power" is set at 200 W. At $T=0$ s, a signal of 150 W is used. At $t=1.5$ s, the input signal is increased. The AEC circuitry reduces the gain as to limit RMS power to 200 W. $T=7.5$ s the input signal is restored to its original level.

Wiring for DDC™

For absolute top quality sound reproduction, the PPA 1200 is equipped with Dynamic Damping Control™.

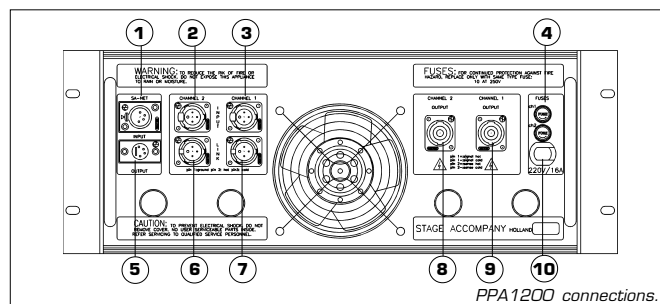
The DDC™ system is based on 2 loudspeaker wires that return from the speaker to the (SA) amplifier.

The picture on the right shows the wiring of 4-pole and 8-pole Speakon connectors in combination with the DDC™ system.



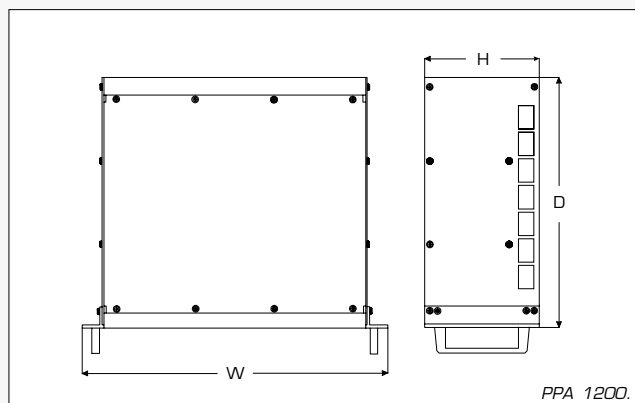
PPA 1200 connections

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|----------------------------------|---------------------------------|
| 1. SAnet input, XLR-4 | 6. Link output (channel 2), XLR |
| 2. Input (channel 2), XLR | 7. Link output (channel 1), XLR |
| 3. Input (channel 1), XLR | 8. Output (channel 2), Speakon |
| 4. Fuses (channel 1 & channel 2) | 9. Output (channel 1), Speakon |
| 5. SAnet output, XLR-4 | 10. AC mains cable |



Technical specifications

Frequency response	: 10 Hz - 60 kHz, (300 W / 8 Ω, +0, - 3 dB)
Input sensitivity	: +6 dBu for specified output (49 V / 4 Ω load)
Input impedance	: 20 kΩ, (each leg)
Output power (RMS / Peak)	: 2 x 350 / 350 W in 8 Ω, 20 Hz - 20 kHz 2 x 600 / 700 W in 4 Ω, 20 Hz - 20 kHz 2 x 900 / 1400 W in 2 Ω, 20 Hz - 20 kHz 1200 / 1400 W in 8 Ω, bridge mode 1800 / 2800 W in 4 Ω, bridge mode
S/N ratio	: > 105 dB, 20 Hz - 20 kHz
Common mode rejection ratio	: > 65 dB at 1 kHz; > 55 dB at 20 kHz
Channel separation	: > 90 dB at 1 kHz; > 80 dB at 20 kHz
THD (300 W / 8 Ohms)	: < 0.005 % at 1 kHz; < 0.01 % at 20 kHz
IMD	: < 0.01 %, 300 W / 8 Ω, 20 Hz - 20 kHz
Slew rate	: > 40 V/μs
Damping factor (with DDC)	: 10,000 at 1 kHz; 3,000 at 10 kHz
Housing	: 19 in. rack mount, 4 HU high, 375 mm (14.8 in.) deep
Physical dimensions (h x w x d)	: 176 x 483 x 375 mm (6.9 x 19.0 x 14.8 in.)
Weight	: 34 kg (75 lb)



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