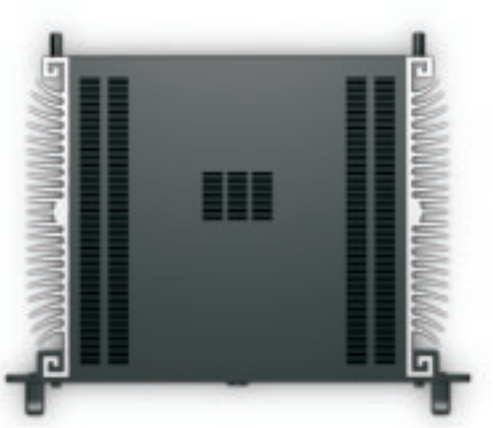

# Champ-4
## Power Amplifier





As a part of APart's revolutionary series of convection cooled power amplifiers, Champ-4 is an amplifier without cooling fans. Its four discrete AB-class amplifiers deliver high quality musical sound, high dynamics, and high reliability - all in a one-unit 19" enclosure.

*No fan*

Power amplifiers have to operate in demanding circumstances. Places where the air is full of dust, nicotine or grease. Because power generates heat, power amplifiers typically have fans to keep their electronic circuits cool.

Unfortunately, these cooling fans are a major headache in the use of high-power amplifiers. They tend to be noisy, and if -or rather, when- the fan breaks down because of dust collection, the amplifier overheats and ultimately fails

.

A fanless amplifier seems the logical thing, but -until now-, the idea never seemed to work for high quality amps with high output power. Thus, installers stick to fan-cooled models and get out of bed to replace a fried amplifier ….

*Unique design*

Especially for the CHAMP-series, APart introduces unique, custom-designed side mount heat sinks. In combination with a self-supporting low resonance frame, they make it possible to create a discrete power amplifier without a noisy and dust-collecting fan inside the enclosure.

This means: less maintenance, no annual fan or dust filter exchange procedure, no more amplifier cleanout, and no more unwanted noise from cooling fans. Because of this, Champ-4 can rely on convection cooling only !


Champ-4 has a torsion-free front in solid brushed aluminum. The removable brackets have a special fixation system that allows easy removal but still assures extraordinary-strength fixation. This makes it possible to use the unit rack mounted as well as freestanding.

On the rear side of the unit the user will find solid binding posts and 4 sets banana screw plugs included.

*APC power management circuitry gets the best out of an amplifier*

APC power management circuitry has been designed especially for Champ series amplifiers. It is one of the most intelligent amplifier protection circuits ever designed, simply because it does the job without interfering with the typical dynamic character of music.

APC allows the user to preset the power potential of the amplifier, while maintaining high power reserves and thus producing high, clean power. It constantly analyses incoming music signals and keeps dynamics alive. An additional ultra fast peak limiter avoids amplifier clipping. With APC, your system is always in control, including your speakers.

*Bridging amplifiers and bridging channels*

It is possible to bridge two Champ-4's. By doing this you unite the power of 2 smaller amplifiers into one big amplifier. The resulting power is usually more than double the power of both amplifiers used individually with the same load. Check the user manual for instructions on how to proceed.

Champ-4 is a four channel amplifier. If you want to use a subwoofer, it is possible to bridge two of the channels for use as a subwoofer channel. The two remaining channels can be used for the top speakers. It is the ideal solution to create a small music system for small dancefloors or parties.

*The striking design and technical innovations of the Champ series are setting new industry standards….whether it is for AV, studio, gigs, home or catering applications: experience the pure musical power of CHAMP-4!*


## TECHNICAL SPECIFICATIONS

High Power toroidal transformer
Low impedance power supply for improved dynamic response

RATED OUTPUT POWER, ALL CHANNELS DRIVEN:

dynamics program power, all channels driven

| | |
|---|---|
| bridge-mono operation 8 ohm | 230 W |
| 8 ohm / ch | 75 W |
| 4 ohm / ch | 125 W |
| dynamics capacity at 2* ohm / single ch | 180 W |

* this value represents the dynamics at impedance dips at certain frequencies of some speakers,
* this amplifier is NOT designed to drive full 2 ohm loads (example 3 or 4 speakers of 8 ohm in parallel)

SINE WAVE POWER, ALL CHANNELS DRIVEN (not recommended, for reference only)

This amplifier is designed for an audiophile music experience, not for lab testing !

| | |
|---|---|
| Bridge-mono operation 8 ohm | 130W |
| 4 channel mode 8 ohm | 60W / ch |
| 4 channel mode 4 ohm | 80W / ch |

Due to special built-in safety circuits, some values can differ from the specs listed above, depending the test set-up.

Due to our continuous R&D and improvements, specifications may change without prior notice at any time.


## TECHNICAL SPECIFICATIONS

GENERAL TECHNICAL SPECIFICATIONS:

| | |
|---|---|
| Input impedance / sensitivity unbalanced (RCA) / 4 ohm | 10 Kohm / 1 V 0dBV |
| Frequency response | 20 Hz - 40 kHz |
| THD | < 0.1 % |
| IMD | < 0.15 % |
| Noise | >100 dBA |
| Gain | 26 dB (32 dB in bridged mode) |
| Damping factor | >100 |
| Dynamics and level control | APC limiter |
| Protection circuits | DC, clip, overcurrent, short-circuit |
| Active filter channel 1 and 2 '100' position | lowpass at 100Hz/12 dB/oct |
| Active filter channel 1 and 2 'AP' position | APart-audio specific filter characteristic optimized for APart-audio subs (check manuals of Subwoofers) |
| Active filter channels 3 and 4 | highpass at 100Hz/12 dB/oct |
| Temperature protection | 90°C/ch + transformer 105°C |
| Cooling | convectional, no fan |
| Power consumption | 26 VA idle, 400VA full program |
| Mains power requirements | 230VAC, 50Hz |

PHYSICAL SPECIFICATIONS

| | |
|---|---|
| Net dimensions (cm) (W x H x D) | 48.3 x 4.4 x 36 |
| Gross dimensions (cm) (W x H x D) | 56 x 10 x 55 |
| Net weight | 7.5 kg |
| Gross weight | 9.0 kg |