CLASS-AB STEREO POWER AMPLIFIER

P-7300

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P-7300 is full model change of P-7100 which launched in 2006 and our flagship class-AB stereo power amplifier.
Technical high lights of P-7300 are ULTRA LOW NOISE and SUPER HIGH DAMPING-FACTOR.
They are inherited from our flagship class-A monophonic power-amplifier A-200.

Dimensions and Weight

- Shrunk body with good usability

P-7100

W: 465 mm
H: 258 mm
D: 545 mm

Weight: 49.0 kg

P-7300

W: 465 mm
H: 238 mm
D: 515 mm

Weight: 48.6 kg

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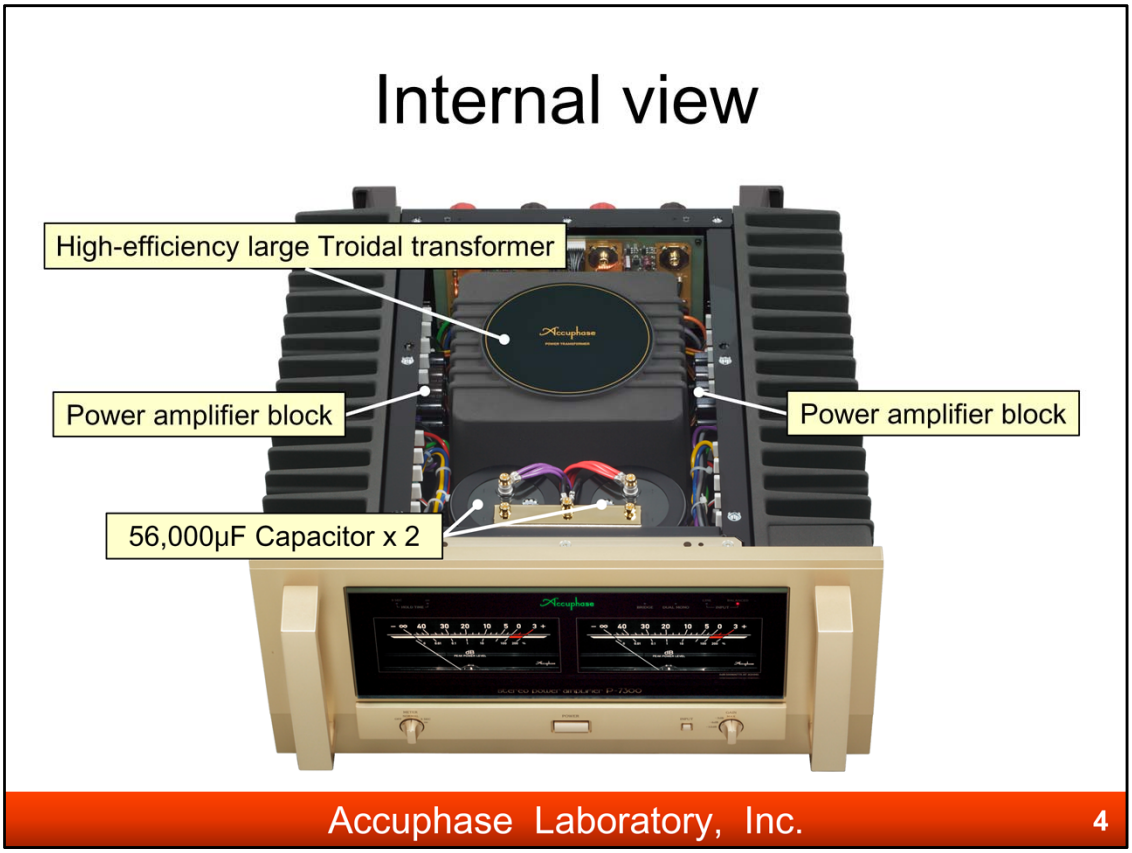
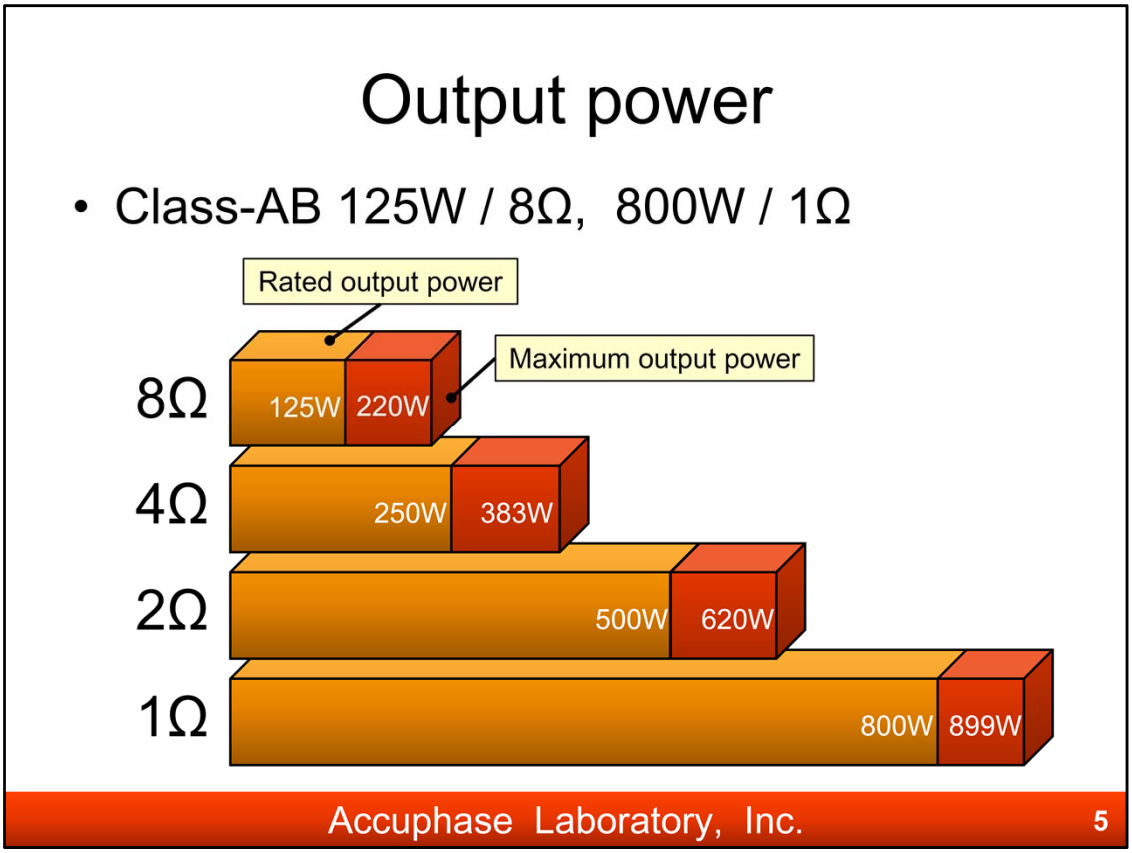
P-7300 shrinks in chassis size, depth 30mm and height 20 mm to provide the good usability.
Unit's weight is almost same as the former model P-7100.

P-7300 has analog power meters with peak-hold and hold time control functions.
2 pairs per channel of large speaker terminals are equipped. They are useful for a bi-wiring connection with loud speakers.



Strong power supply by large Troidal transformer with aluminum heat-radiation fins and 2 pieces of 56,000μF special capacitors are installed.
They are specially developed for hybrid electric vehicles, and have a specialized structure for vibration-proof characteristic.

Power transformer: 14.6 kg



P-7300 is a high-power Class AB amplifier which delivers rated output power 125W/8Ω, 800W/1Ω.
To observe severe safety regulation of exteriors temperature rises with the shrunk body, rated output power at 1 ohm load has been suppressed from P-7100.

Rated output power

Load	8Ω	4Ω	2Ω	1Ω
P-7300	125 W	250 W	500 W	800 W
P-7100	125 W	250 W	500 W	1000 W

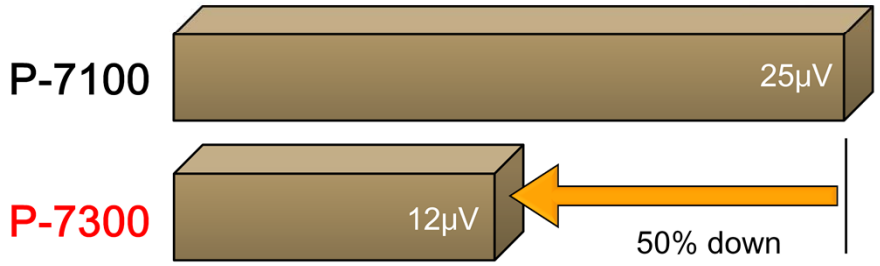
But, thanks to a strong power transformer, maximum output power at 8 Ω and 4 Ω load has been enhanced.

Maximum output power

Load	8Ω	4Ω	2Ω	1Ω
P-7300	220 W	383 W	620 W	899 W
P-7100	173 W	334 W	620 W	1045 W

Ultra Low Noise

- Lower noise than P-7100
  - Actual noise voltage: 12μV



Actual output noise voltage

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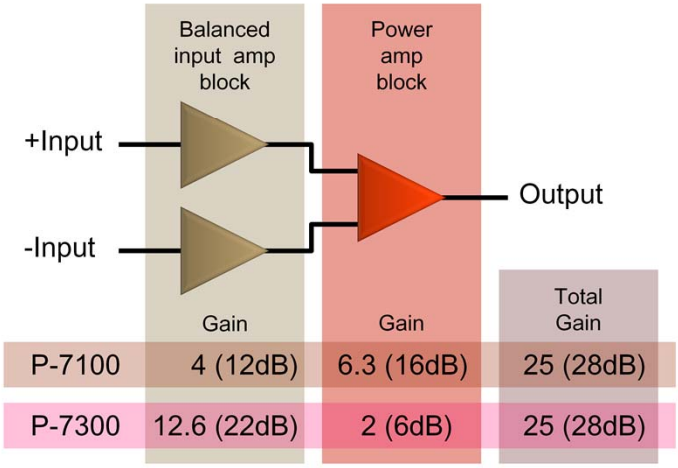
P-7300 achieves 12μV of actual output noise voltage. This is less than half of the former model P-7100. P-7300 is the lowest-noise stereo power amplifier in the existing Accuphase product line-ups.

Technology for low noise

- Optimized gain allocation
  - Output noise voltage is decreased to 33%



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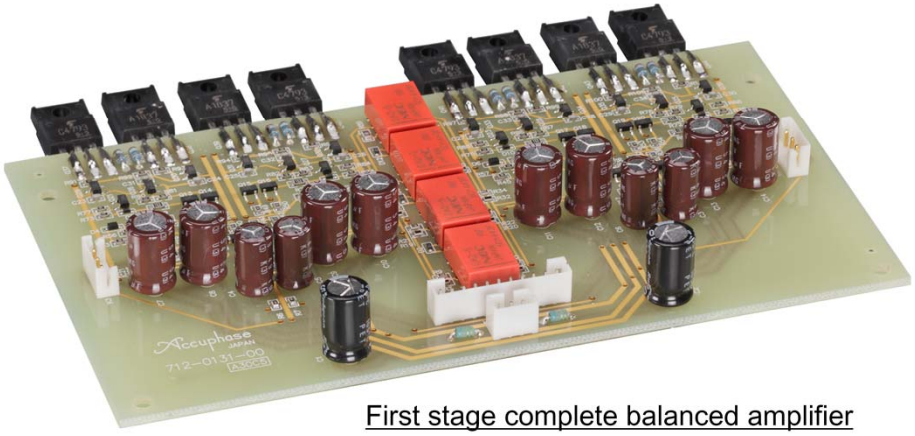
The output noise is reduced by some technologies.
Optimizing gain allocation of 2 amplifier blocks constructed with the instrumentation amplifier.
Enhancing the gain of balanced input amplifier block from 4 times to 12.6 times.
Output noise voltage is ideally decreased to 33%.

Technology for low noise

- Discrete configuration amplifier
  - Using low noise transistor in input stage



First stage complete balanced amplifier

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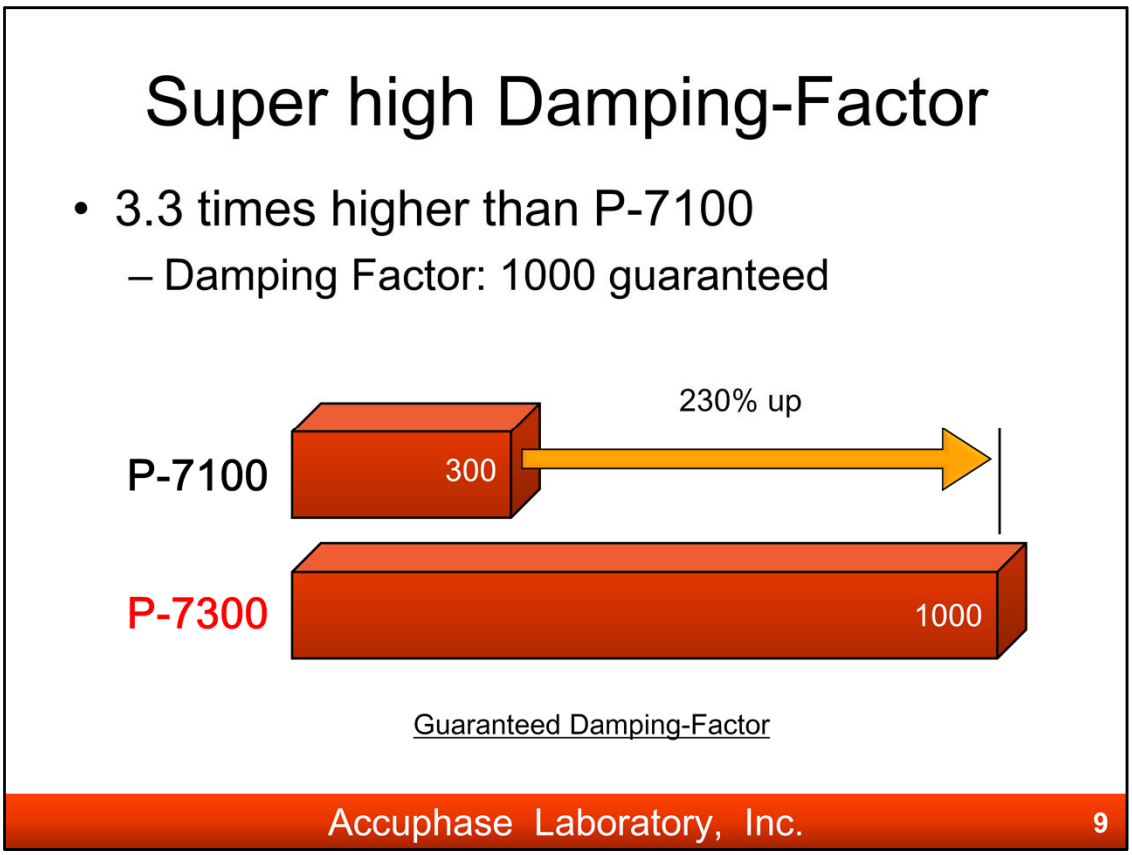
The output noise is also reduced by the discrete configuration amplifiers which no ICs are on signal path.



P-7300 achieves 1000 of Damping-Factor. This is over 3.3 times higher than the former model P-7100.
This is guaranteed specification. In actuality P-7300 has more than 2000 of Damping-Factor.

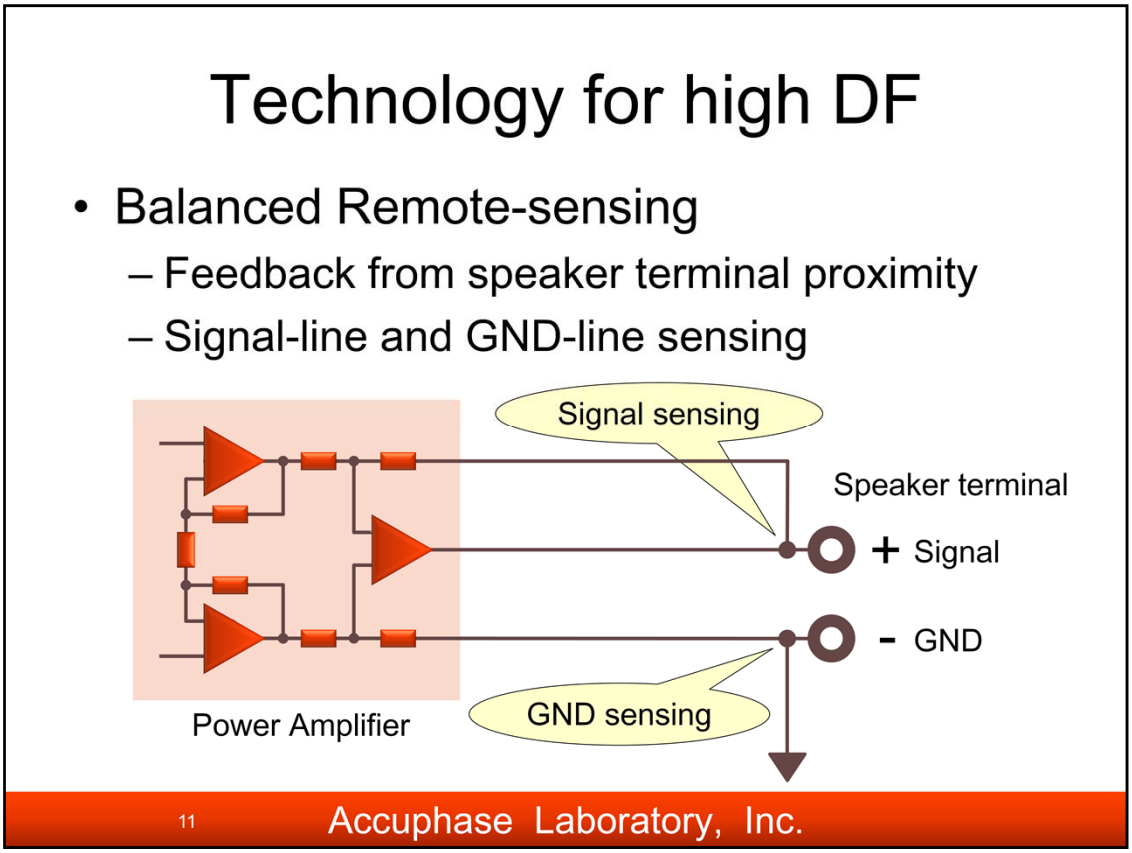
*Damping-Factor:
A index of speaker driving ability. Higher Damping-Factor amplifier has higher speaker driving ability.
DF = 8 ohm / Output-impedance

Technology for high DF

- Very low output impedance power amplifier engine
  - Bipolar transistor 10 parallel push-pull

Power amp. Assembly

The Output impedance is decreased by 10 parallel push-pull output stage arrangements of bi-polar transistor.



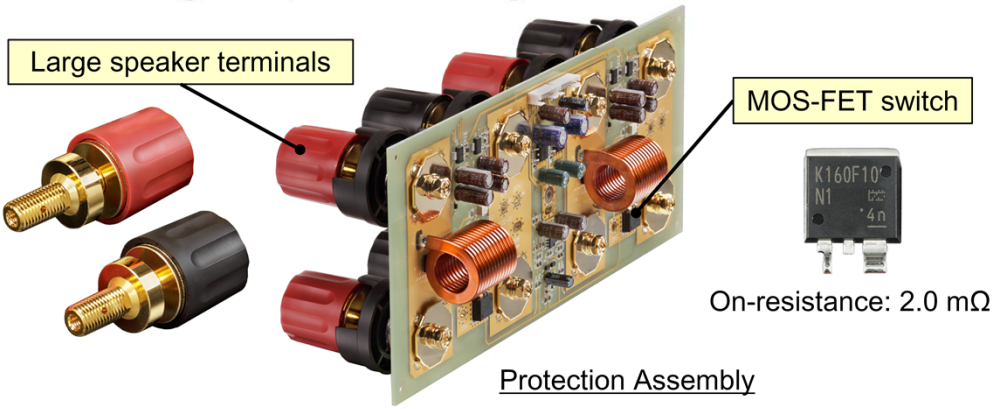
Remote-sensing is the technique to lower output impedance of amplifier by the negative feedback with signal sensing from close up the speaker terminals.

Balanced Remote-sensing is the technique to make impedance even lower by GND sensing and the negative feedback of GND level with adding the signal sensing.

Not only Damping-factor is improved but also Total Harmonic Distortion and Intermodulation Distortion get better by Balanced Remote-sensing.

Technology for high DF

- Speaker protection equipped with MOS-FET
- Using very low resistance components
- Short signal path configuration



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Mechanical relay is the most common for speaker protection. It does not have good reliability and so lower contact resistance either.
P-7300 employed MOS-FET switch instead of mechanical relay for speaker protection.
Damping-Factor, reliability and sound quality are improved thanks to MOS-FET switch.
Also, large speaker terminals, rectangular wire coils and some other very low resistance-components are specially selected for P-7300.
Making signal path thick and short attains a low impedance.