

# Class-A STEREO POWER AMPLIFIER A-80



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The A-80 is the successor to the A-75, launched in 2018, and incorporates the technology of the flagship A-300 Class-A mono power amplifier to exceed the sound quality and electrical performance of the A-75.

Although the A-80 is class A, it can output linear power in all impedances and can drive any speaker perfectly.

The near-zero noise performance, combined with the attractive timbre of Class-A, creates a new expression of music.

It also offers complete protection against abnormal conditions, satisfying the high demands of audiophiles and music fans over the long term.

## Dimensions and weight

- Unit dimensions are almost same as the former model A-75
- Slightly heavier than A-75



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The A-80 unit dimensions are almost the same as the previous model A-75. However, it is slightly heavier than the A-75.

# Evolution of front panel design

- The power meters re-positioned
- The handle, power switch, and sub-panel are larger



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The front panel of the A-80 has a powerful design, with the power meters re-positioned and the handles, power switch, and sub-panel enlarged.

# Internal View



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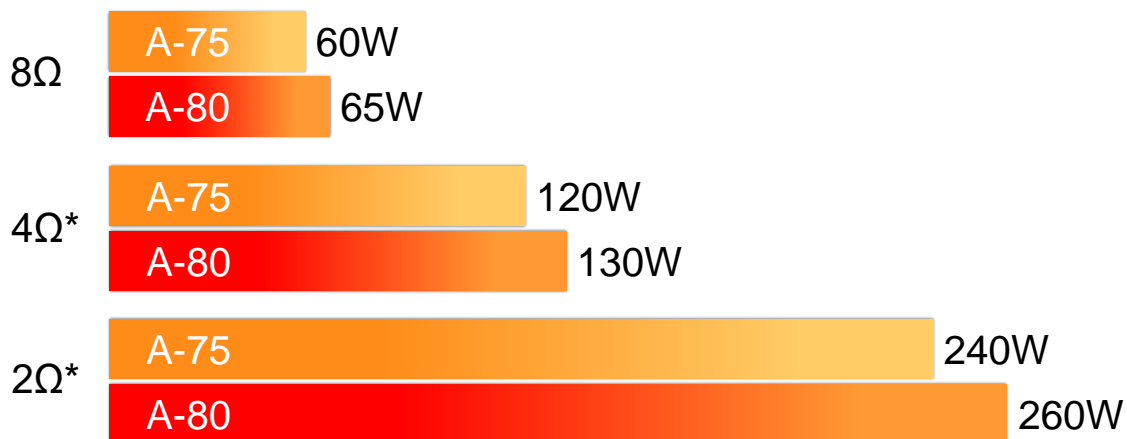
It has an intense power supply, a massive special-made high-efficiency toroidal transformer, and two sizeable 120000 $\mu$ F special-made filtering capacitors in the unit's center.

The filtering capacitors have the largest capacity of any Accuphase product.

※The filtering capacitor of A-300 and A-75 is 100000 $\mu$ F.

# Output power

- Rated output power is increased by 8% from A-75



Rated output power

\*Limited to music signals

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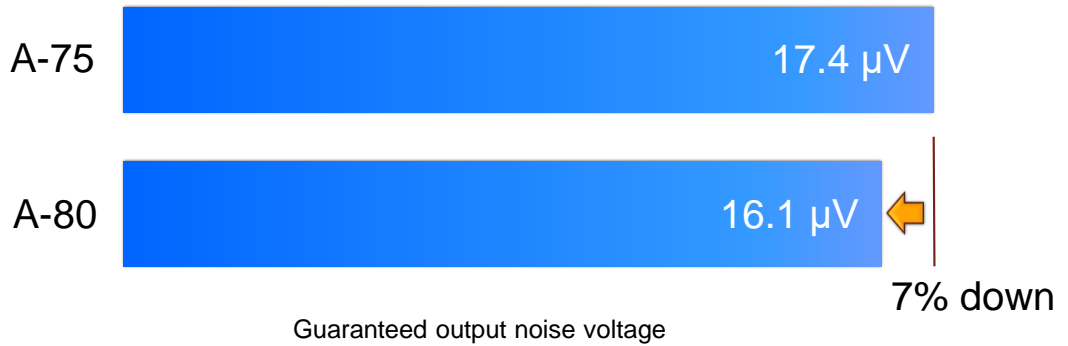
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The A-80 improves the Class-A operation area by 8% over the A-75 as 65W into 8Ω load.

Rated output power is doubled when the load impedance becomes 1/2; it reaches 260W into a 2Ω load.

# Ultra low noise

- Guaranteed output noise voltage 7% lower than the A-75
  - Guaranteed SN-ratio: 123dB



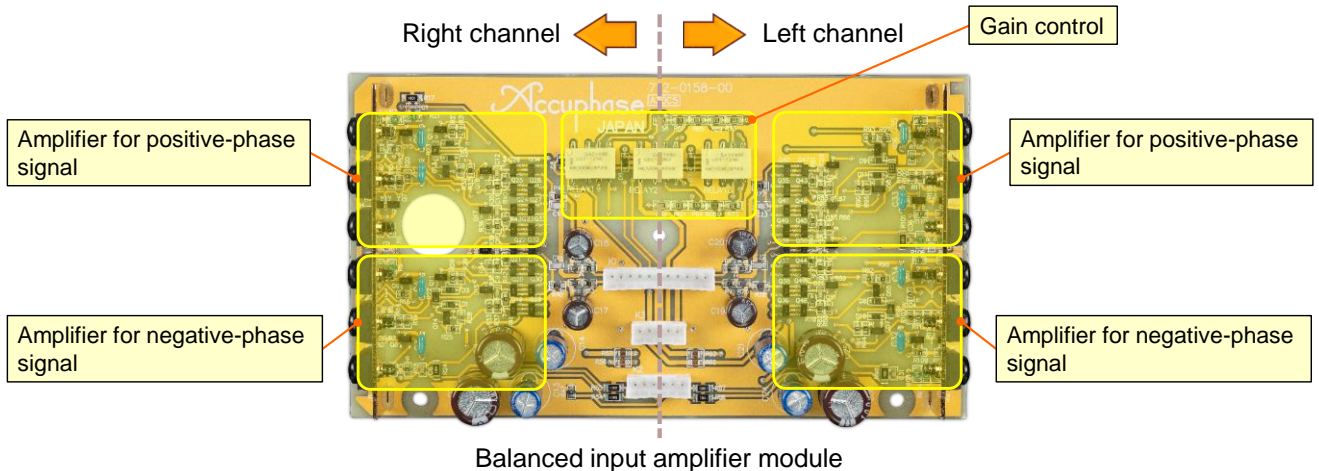
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The former model A-75 has excellent noise performance; however, the A-80 achieves even 7% lower guaranteed output noise voltage than the former model.

# Technology for ultra-low noise

- Fully discrete configuration Balanced input amplifier



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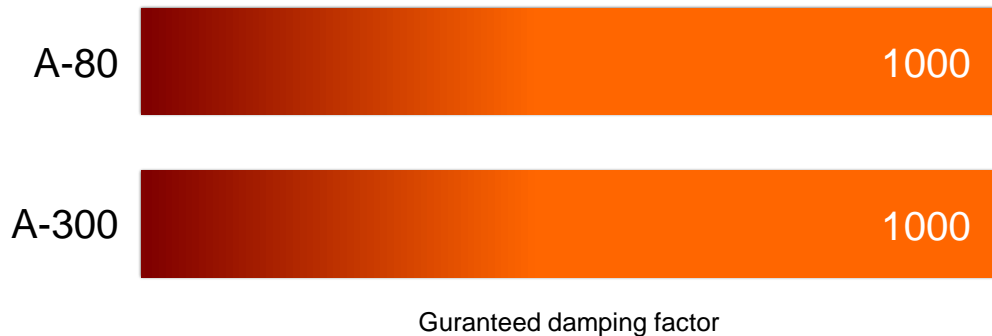
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The output noise is reduced by a balanced input amplifier of fully discrete construction, newly designed in the A-300's circuit configuration.

The overall amplification of the A-80 is set by the gain control of the balanced input amplifier. By reducing the amplification level, the output noise can be further reduced.

# Super high damping factor

- Guaranteed damping factor is the same as A-300
  - Guaranteed damping factor: 1000



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The A-80 has a guaranteed Damping Factor of 1000. It is the same as the A-300.

The actual value is well more than 2000.

\*Damping-Factor:

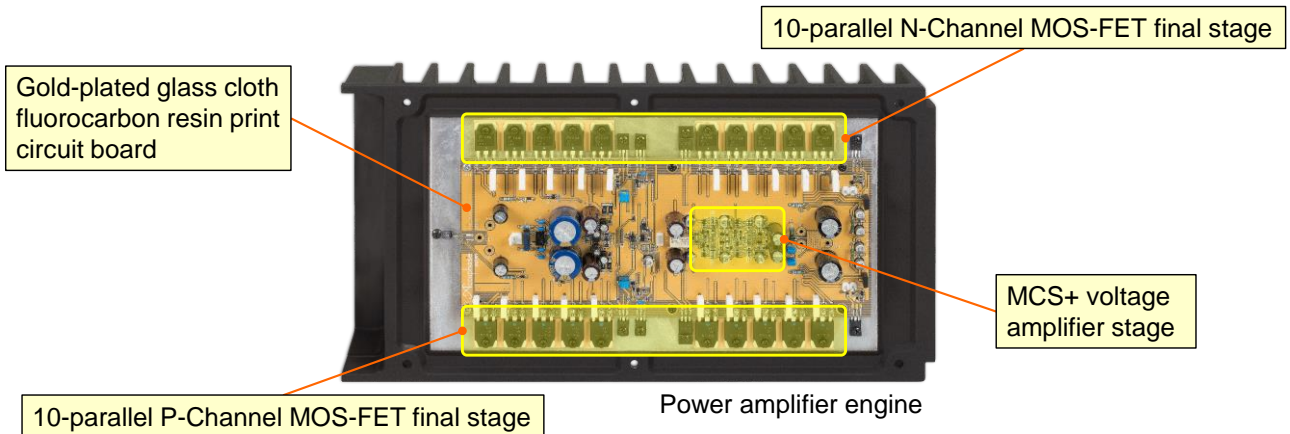
An index of speaker driving ability. A Higher Damping-Factor amplifier has higher speaker driving ability.

$DF = 8\Omega / \text{Output-impedance}$



# Technology for high damping factor

- Very low output impedance power amplifier engine
  - MOS-FET 10-parallel push-pull final stage



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The 10-parallel push-pull arrangement of MOS-FETs in the power amplifier engine's final stage reduces the output impedance, thereby increasing the damping factor.

The gold-plated glass cloth fluorocarbon resin print circuit board helps to improve lower impedance and reliability.

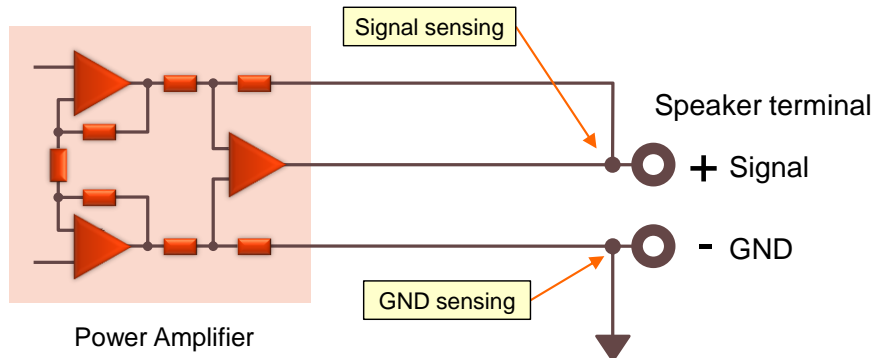
The voltage amplification stage uses Accuphase's original circuit MCS+\* to reduce noise.

\*MCS+(Multiple Circuit Summing-up plus):

It is a technique for improving the noise performance of analog amplification circuitry by using circuit summing-up.

# Technology for high damping factor

- Balanced Remote-sensing
  - Feedback from speaker terminal proximity
  - Signal-line and GND-line sensing



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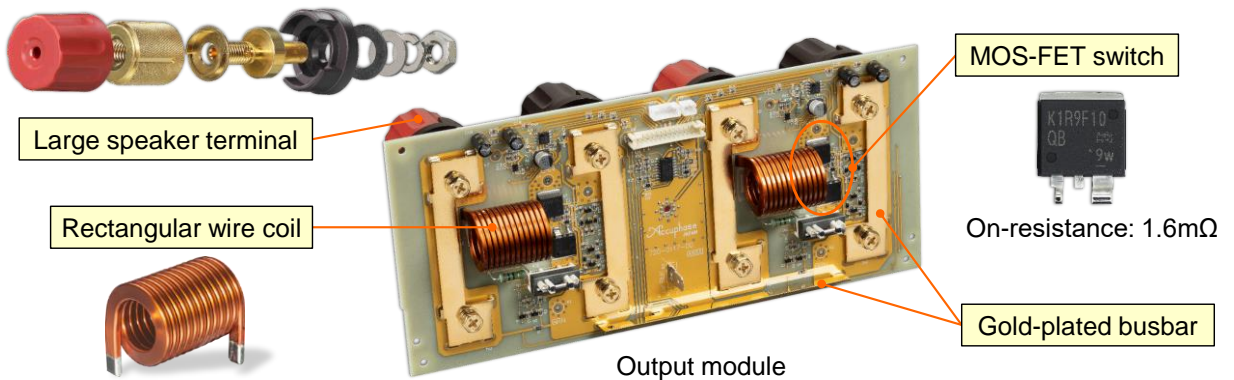
Remote sensing is the technique to lower the amplifier's output impedance by the negative feedback with the signal sensing from nearby the speaker terminals.

Balanced remote sensing is also the technique to lower the output impedance by both the signal sensing and the GND sensing, that is, the negative feedback of the GND level.

Balanced remote sensing improves not only the Damping Factor but also the Total Harmonic Distortion and the Intermodulation Distortion.

# Technology for high damping factor

- Speaker protection equipped with the MOS-FET switch circuit
- Short signal path configuration



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A mechanical relay is a typical speaker protection component, but its contact resistance is higher than people think.

Therefore, Accuphase has chosen the MOS-FET switch instead of conventional mechanical relays for speaker protection.

Thanks to this MOS-FET switch, the damping factor, reliability, and sound quality are all improved.

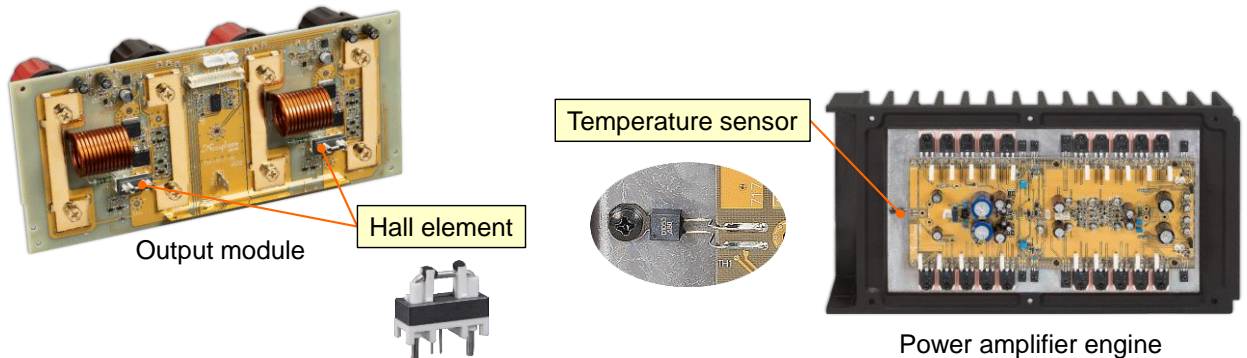
The A-80 adopts a new MOS-FET, with a very low on-resistance of  $1.6\text{m}\Omega$  (the A-75 used  $2.0\text{m}\Omega$  on-resistance MOS-FET).

The A-80 also employs carefully selected very low-impedance components such as large speaker terminals, rectangular wire coils, gold-plated busbar, etc.

Making signal paths thick and short helps to attain low impedance as well.

# Pursuing further product safety and reliability

- Hall element detects the excessive output current
- Temperature sensors are installed on the heatsink



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The Hall element on the output module detects overcurrent in the event of an output short circuit, minimizing any adverse effects on the music signal.

The A-80 adopts temperature sensors that detect the heatsink temperature; thanks to this, the unit accurately ascertains the high-temperature alarm in the power amplifier engine.

\*When these protection circuits are activated, the unit completely interrupts the speaker output and makes the power meters flash to indicate the abnormal condition.