

INTEGRATED STEREO AMPLIFIER E-280



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Though the E-270, which was launched in 2016, was just the entry-class model, inheriting the great technologies from the higher models, it has been attracting the audiophiles all over the world and supporting their music life with its superb electrical performance, sound quality and its ease-to-use.

The new E-280 employs the latest AAVA volume control system and attains 12% lower noise performance. And the power module section which adopts the contactless MOS-FET switches represent a damping factor of 500.

2 options boards can be added for improved expandability, from the analog records to the Hi-res digital sources, E-280 allows audiophiles to give a direct access to every music source.

The evolved E-280 is irreplaceable to all music lovers with its magnificent technology philosophy of higher-grade models.

Differences in front view



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The E-280 inherits the E-270's sleek design with no sub-panel, it is simple but sophisticated that contains all required functions as an integrated amp.

The needle power meter with indication range to -50dB is able to move even at the small volume level less than -60dB.

Sampling Frequency Display has expanded to "MHz" to support the DAC-50 operation.

Internal view



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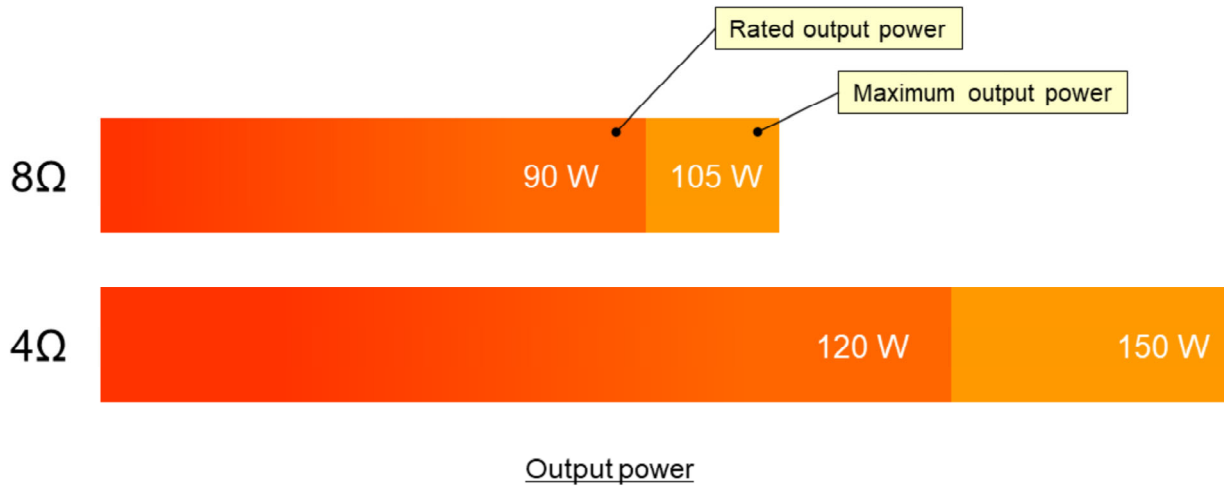
E-280 takes the mono block construction. With the symmetrical arrangement of L / R power amplifier blocks, the strong power supply with a massive high-efficiency transformer and two large 30000µF specially-made filtering capacitors are installed at the center of unit.

AAVA circuit block is located near the front panel.

Preamplifier and power amplifier sections can be used separately for further enhanced sound with the Digital Voicing Equalizer DG series or a bi-amped setup driven by separate amplifiers.

Output power

- Class-AB 90W / 8Ω, 120W / 4Ω



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The rated output power of E-280 is 90W into 8ohm and 120W into 4ohm.

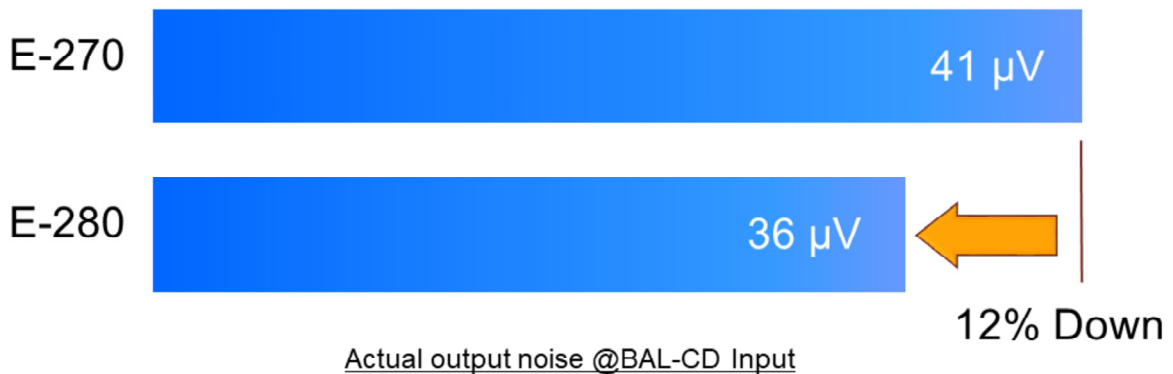
Maximum output power is more than that.

They are 120W into 8Ω load and 150W into 4Ω load.

It is just an integrated amp but it can easily drive any low-efficiency loudspeakers in spite of their sizes.

Ultra low noise

- 12% lower than the former model
 - S/N ratio: 107dB guarantee (E-270: 106dB)
 - Volume Position -30dB, BAL-CD Input



Actual output noise @BAL-CD Input

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The E-280 succeeds in achieving 44% noise reduction at maximum volume position with a refined balanced input circuit, it guarantees 107dB Signal to Noise ratio at the maximum gain.

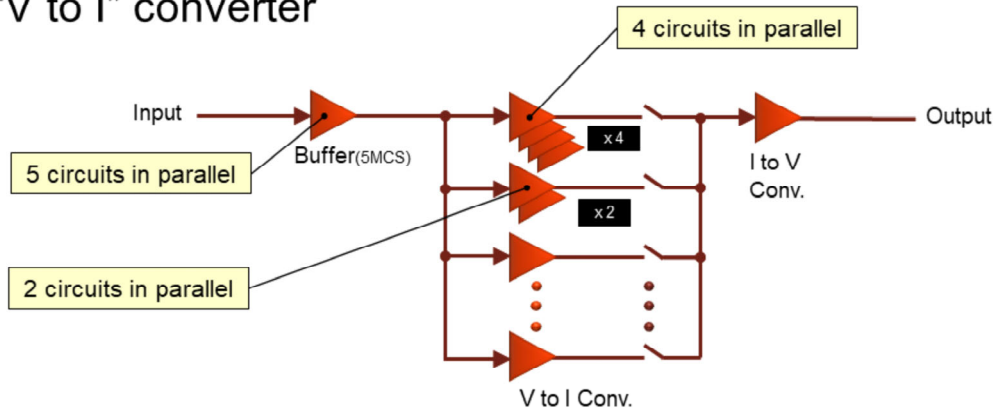
Also, the E-280 marks 41μV of the actual noise voltage even in usual volume level.

This is 12% lower(1.1dB) than the former model.

Technology for ultra low noise

- Improvement of AAVA

- Fourth paralleled largest unit, paralleled second largest unit in “V to I” converter



AAVA: Accuphase Analog Vari-gain Amplifier

AAVA(Accuphase Analog Vari-gain Amplifier) is a volume control principle that eliminates all variable resistors from the signal path. This is the original Accuphase unique technology.

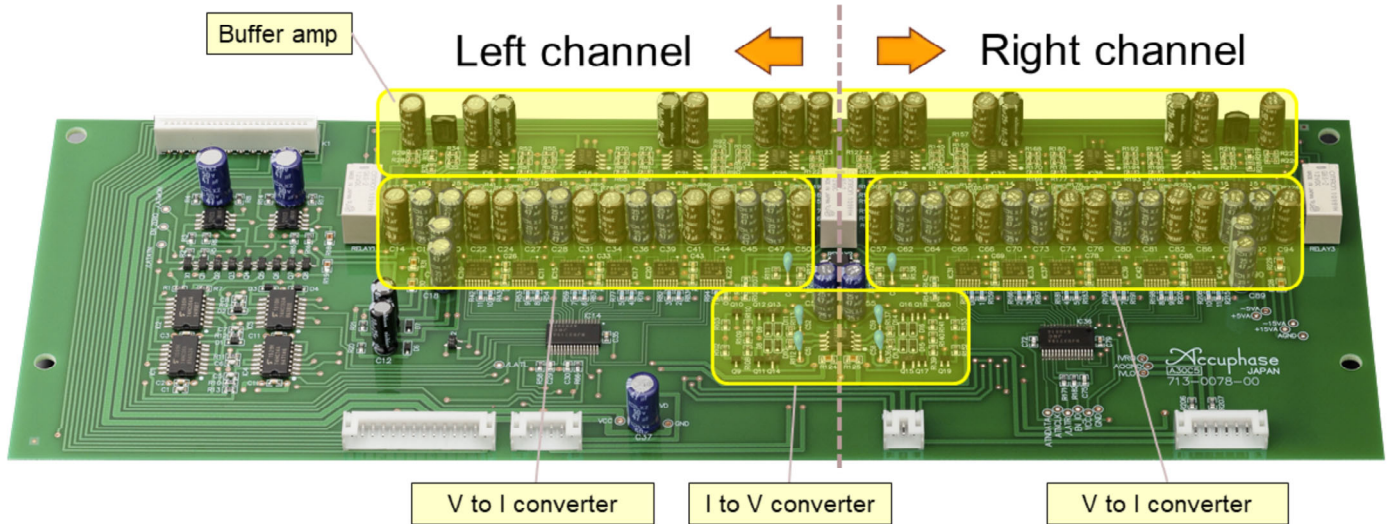
The AAVA module in the new E-280 achieves low noise by the fourth paralleled largest unit and the paralleled second largest unit in “V to I” converters.

This improvement helps to make the V-I converter amp’s output current double, and it results in reducing the value of the I-V converter’s feedback resistor and the noise coming from them.

*AAVA module in the former model E-270 has paralleled the largest two units in “V to I” converters.

Technology for ultra low noise

- The AAVA Assembly



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Left and right channels are symmetrically arranged inside of the AAVA assembly board.

Super high Damping Factor(D.F.)

- 25% higher than the former model



Guaranteed D.F.

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The E-280 guarantees the Damping Factor of 500, representing 25% improvement over the former model.

****Damping Factor:**

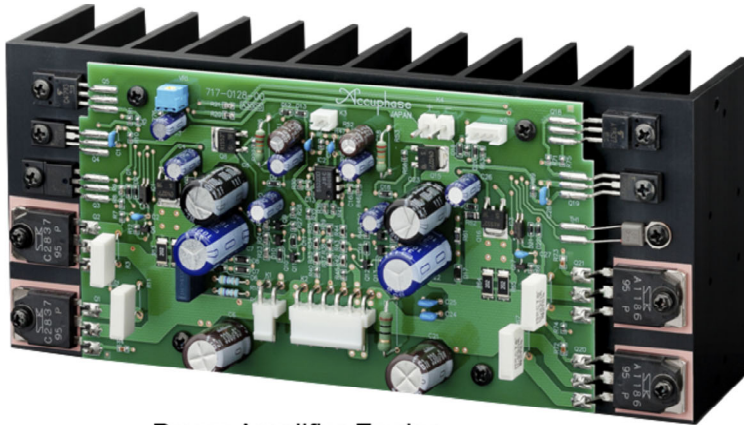
An index of speaker driving ability.

Higher Damping Factor amplifier has higher speaker driving ability.

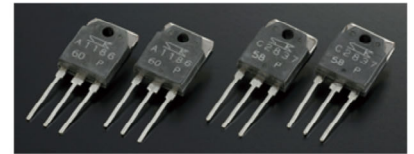
D.F. = 8Ω / Output-impedance

Technology for super high D.F.

- Power amplifier
 - Output stage with parallel push-pull bipolar transistors



Power Amplifier Engine



Bipolar transistor
150V / 10A

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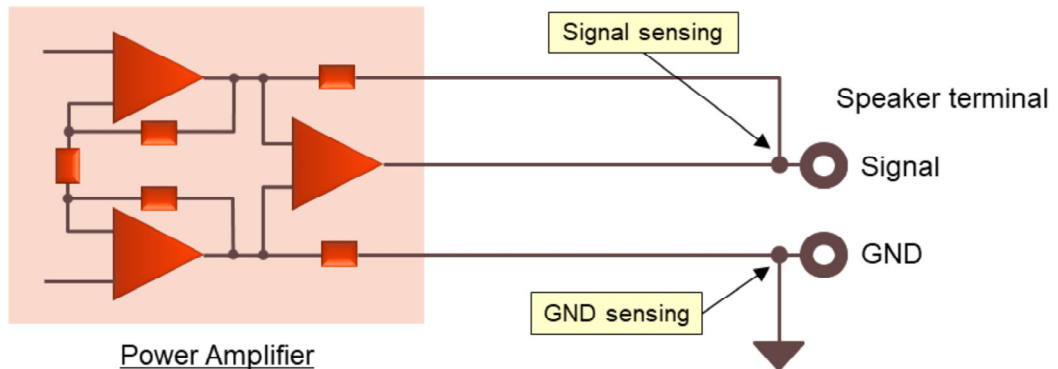
Same as other Accuphase self-standing power amplifiers, the E-280 applies “Instrumentation Amplifier principle” in its power amplification section.

The output impedance of power amplifier is decreased by the parallel push-pull final stage arrangement of high output current with the bipolar transistors of good linearity.

The low impedance design and optimized wiring and parts placement brings out the high damping factor of 500.

Technology for super high D.F.

- Balanced Remote Sensing
 - Feedback from nearby speaker terminals
 - Signal-line and GND-line sensing



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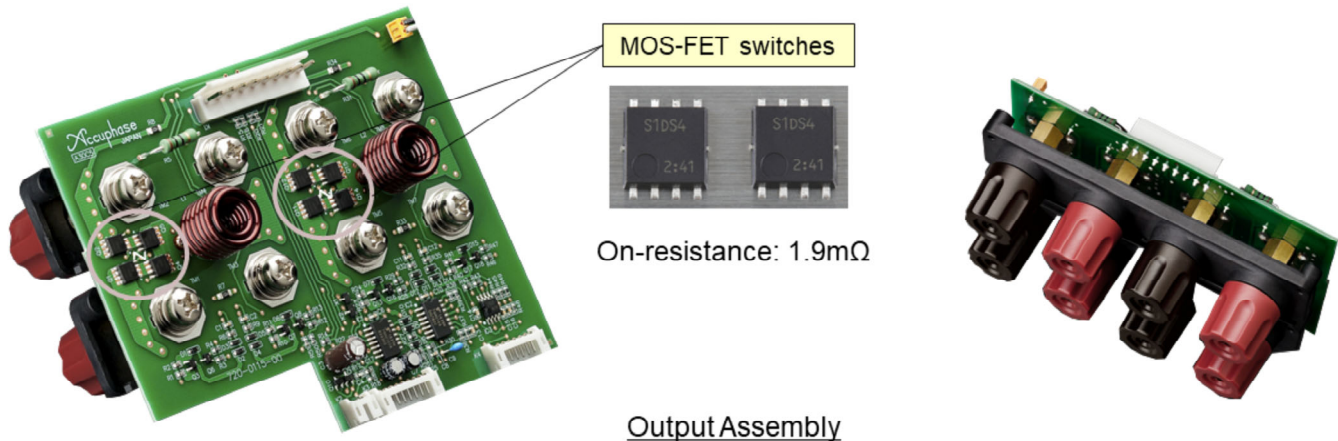
Remote Sensing is the technique to lower the output impedance of amplifier by the negative feedback with signal sensing from nearby the speaker terminals.

Balanced Remote Sensing is the technique to make the output impedance even lower by both the signal sensing and the GND sensing, that is the negative feedback of GND level.

Not only Damping Factor, but also Total Harmonic Distortion and Intermodulation Distortion are all improved by the Balanced Remote Sensing.

Technology for super high D.F.

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



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Although a mechanical relay is the most popular component for speaker protection, it does not have high reliability and low contact resistance either.

E-280 applies a MOS-FET switch instead of mechanical relay for speaker protection.

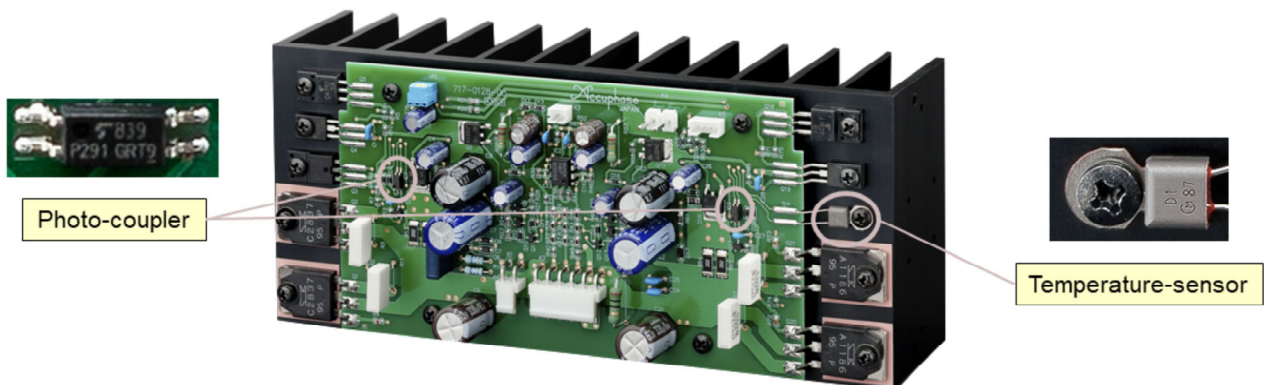
Damping-Factor, reliability and sound quality are all improved by this MOS-FET switch.

They have very low on-resistance of 1.9mΩ and high current capability of 130A.

By connecting speaker terminals and PC-board directly, the signal path can be made shorter to obtain the low impedance.

Pursuing further product safety and reliability

- Power amplifier
 - Newly-developed protection circuit using Photo-couplers
 - Temperature-sensors are installed on both heat sinks



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To enhance the further product safety and reliability, E-280 improves the protection circuit on Power amplifier section.

- Newly-developed protection circuit
Over current protection circuit using photo-coupler is applied, it does not affect the sound quality at all.
- Temperature-sensor
Temperature-sensors which detects the heat sink temperature are installed on L / R both heat sinks one by one.
Thanks to this, the unit accurately ascertains the high temperature alarm in power amplifier section.

****When these protection circuits are activate, the unit completely cuts the speaker output off and makes the power meters flash to indicate its abnormal condition.**

Further more...

- Ready for the option board DAC-50 and AD-50
- High quality remote commander



Two Option Slots

**E-270: One slot



Remote commander RC-250

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Two option board slots on the rear panel provide the further expandability for PC audio and vinyl record playback.

**E-270: One slot