Class-A Integrated Stereo Amplifier

E-800

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Since launching E-530 in 2002, Class-A integrated amplifiers reigned as the top model in the integrated amplifier segment, with numbers of engineering updates.

The innovative E-800 is the totally new series of Class-A integrated amps, thought it is just an integrated amplifier but the high-powered one that can deliver the powerful output better than the separate systems.

E-800 has the technical features of “Ultra Low Noise” and “Super High Damping Factor”.

The superb Balanced AAVA type volume control completely cancels out any external noise and results in unsurpassed S/N ratio with the circuits driven in a fully balanced configuration.

In a power amplifier section, the same architecture as A-48 and strong power supply is employed, it helps the amplifier easily and completely to drive any kind of loudspeaker.

The E-800 realizes the ideal form of audio playback balancing both Class-A operation and high power, We believe it just grabs not only audiophiles’ but music lovers’ hearts.

Dimensions and Weight

- Bigger unit dimensions and heavier weight than ever before Accuphase integrated amps.
  - Width 465mm
  - Height 239mm
  - Depth 502mm
  - Weight 36.0kg

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To realize the separate-system sound quality, E-800 is given a new type of big and firm enclosure for a integrated amplifier.

** E-650: Width 465mm, Height 191mm, Depth 428mm, Weight 25.3kg

Front and Rear View

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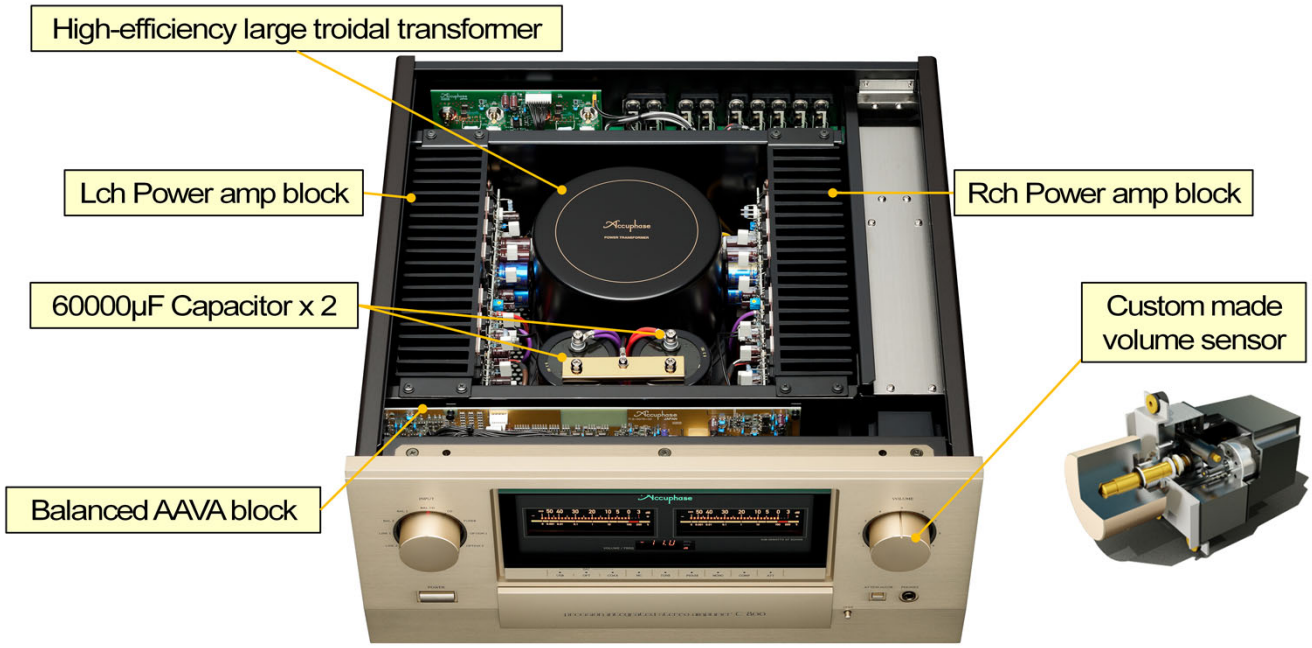
The 30 segment digital power meter with -50 dB indication range is able to swing even at the small volume level less than -60dB.
** The power meter of E-650 has 26 segment.

3 lines of balanced inputs are equipped for various input source.
**E-650 has 2 lines of balanced inputs.

Internal View



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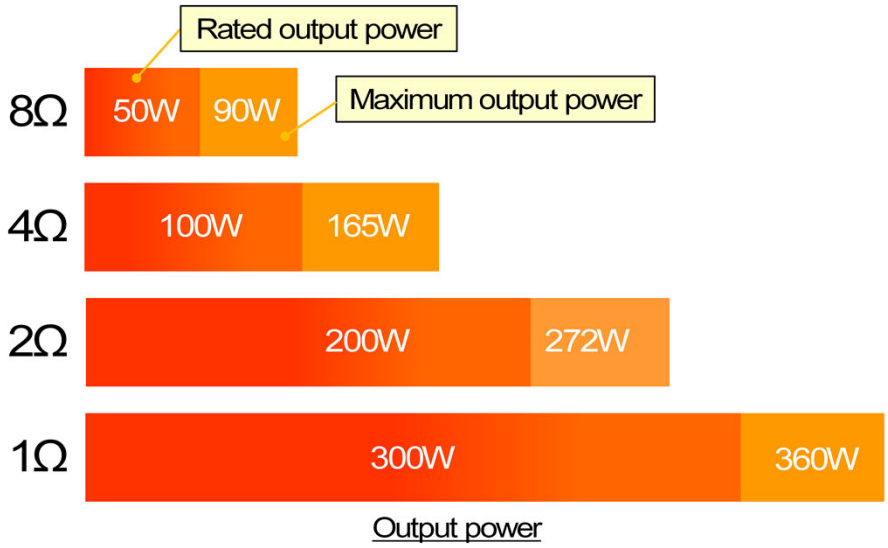
E-800 has a mono-block construction. The strong power supply with a massive special made high-efficiency toroidal transformer and two large 60000μF special made filtering capacitors are installed in the center of the unit. In addition, the two power amplifier units are kept separate for the left and right channels.

Balanced AAVA module is set at the front of the unit to avoid the noise interference. The accurate operation is performed with the custom-made high-accuracy volume sensor.

The volume sensor is upgraded from the one in C-2850. It makes the movement smooth and the moving sound by the remote commander even gets smaller than before.

Output Power

- Class-A 50W / 8Ω, 200W / 2Ω



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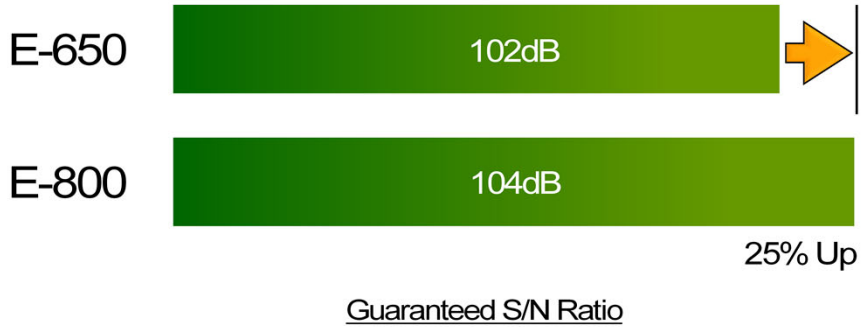
The rated out put power is fully linear power progression of 50W into 8 ohm, 100W into 4 ohm, and until 200W into 2 ohm. Even 1 ohm load condition, it can deliver 300W power.

E-800 can easily and completely drive any kind of loudspeakers like powerful separated power amplifiers.

Ultra Low Noise

- Lowest noise level out of integrated amplifiers
  - S/N ratio: 104dB guarantee (E-650: 102dB)



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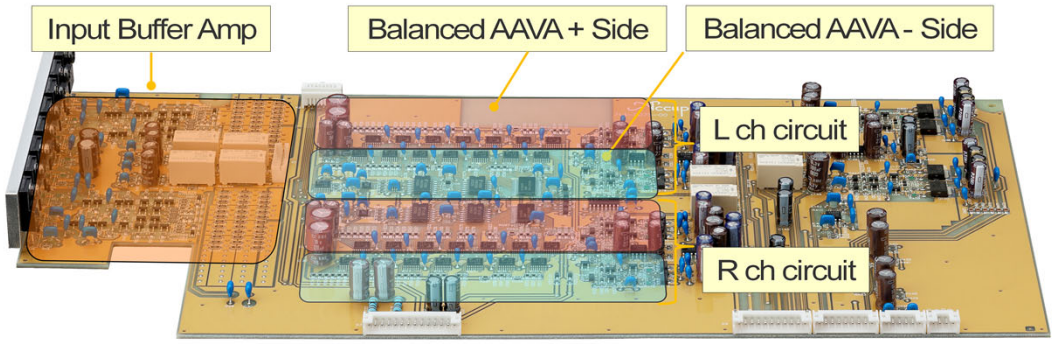
E-800 marks 104dB of the guaranteed S/N Ratio.
This is 25% lower (2dB) than E-650.

Technology for ultra low noise

- Balanced AAVA architecture
- Balanced signal transfer including tone control



AAVA: Accuphase Analog Vari-gain Amplifier

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The AAVA (Accuphase Analog Vari-gain Amplifier) is a volume control principle that eliminates all variable resistors from the signal path. It is totally different from any others.

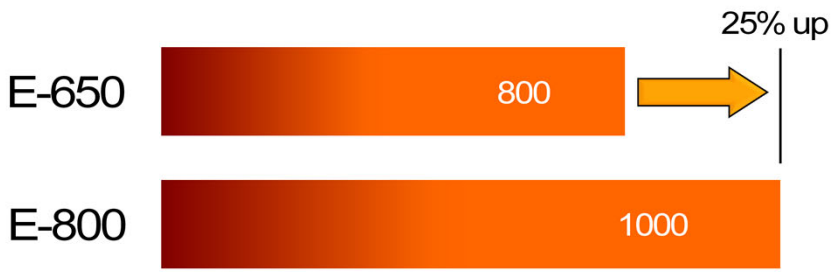
E-800 employs two AAVA modules per channel with a fully balanced configuration from the input to the output. Tone control system which is the post stage of AAVA works as balanced AAVA circuit as well.
The power amplifier section can receive those positive and negative signals at the same time by the instrumentation amplifier topology.

It works as the totally balanced circuit which is tolerant to internal and external harmful noise.

The gold-plated signal paths also contribute to the long-term reliability and maintaining the sound quality.

Super high Damping-Factor

- 25% higher than E-650
  - Damping Factor: 1000 guaranteed



Guaranteed Damping-Factor

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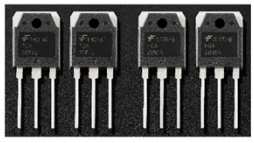
E-800 achieves 1000 of guaranteed Damping-Factor.
It is 25% higher than E-650.

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

Technology for super high Damping Factor

- Very low output impedance power amplifier engine
  - Same circuit configuration as Class-A Stereo Power amp A-48
  - MOS-FET 6 parallel push-pull output stage

Power amplifier engine



MOS-FET
Current Capacity :33A

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The output impedance is made lower by 6 parallel push-pull final stage arrangement of MOS-FETs.

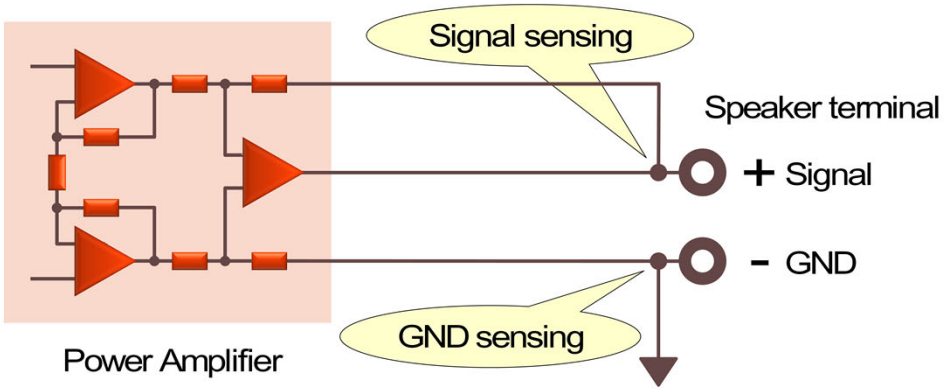
Circuit configuration of the power amplifier engine is as same as the latest Class-A Stereo Power amplifier A-48.

E-800 features the new power MOS-FET device which is heavy-duty and has the large rated current characteristic.

**Current capacity of power MOS-FET
E-650's MOS-FET(VISHAY): 21A
E-800's MOS-FET(Fairchild): 33A

Technology for high DF

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



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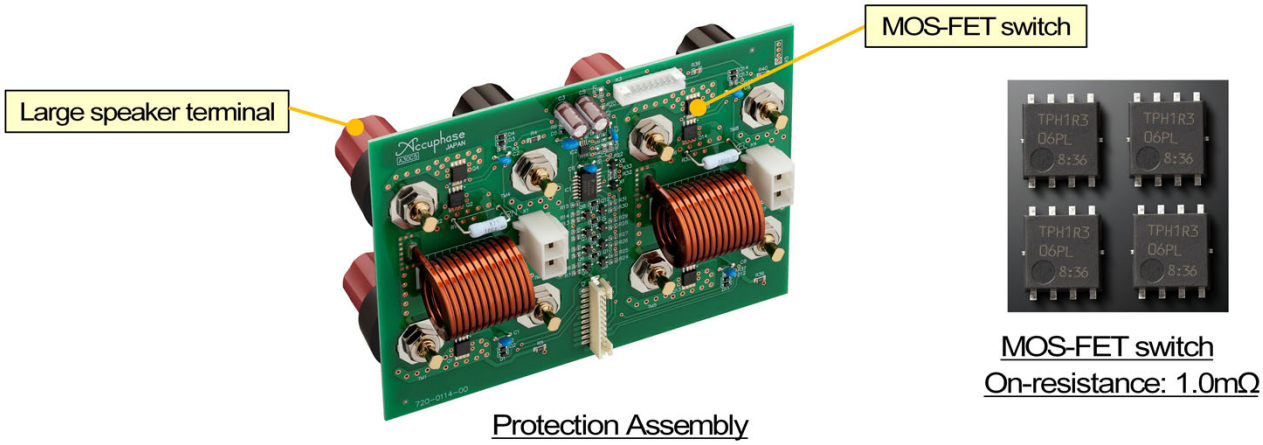
Remote Sensing is the technique to lower the output impedance of amplifier by the negative feedback with signal sensing from nearby the speaker terminals.

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 high DF

- Speaker protection equipped with MOSFET
- Short signal path configuration



Protection Assembly

MOS-FET switch
On-resistance: 1.0mΩ

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Mechanical relays are the common components for speaker protection but the contact resistance of mechanical relay is higher than people think.

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

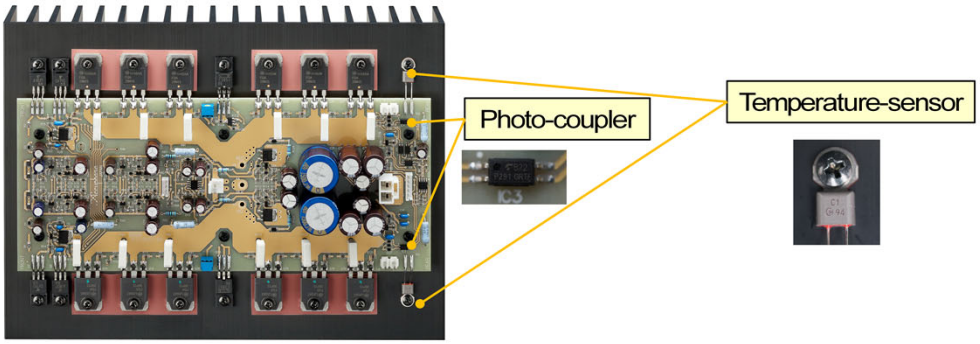
Thanks to this MOS-FET switch, the Damping Factor, reliability and sound quality are all improved.

E-800 features the new MOS-FET device for this switch which has very low on-resistance.
**On-resistance of MOS-FET device
E-650's MOS-FET: 1.6mΩ
E-800's MOS-FET: 1.0mΩ

E-800 employs carefully-selected very low-impedance components such as the large speaker terminals and so on. Making signal paths thick and short also helps attaining the low impedance.

Pursuing further product safety and reliability

- Power amplifier
  - Newly-developed protection circuit using Photo-couplers
  - Temperature-sensors are installed on the heatsink



Power amplifier Block

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The newly designed output protection circuit can detect any short-circuiting of the speaker terminals with due consideration for the product safety.

Temperature-sensors which detects the heatsink temperature are installed on the heatsink(2 sensors on a heatsink). Thanks to this, the unit accurately ascertains the high temperature alarm in power amplifier section.

Moreover, the new circuit is added that the temperature at output stage is controlled not to rise by decreasing the idle current.

Thanks to the photo-coupler, the detected signal is completely isolated from the output signal to minimize the negative effects on the sound quality.

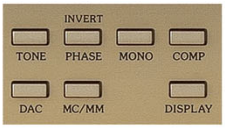
**When these protection circuits are activated, the unit completely interrupts speaker output and makes the power meters flash to indicate the abnormal condition.

Further more …

- Ready for the option board DAC-50 and AD-50
  - Sampling frequency on the front display
  - Possible to choose digital input source, MC/MM manually

Option Boards

Multi function display



Input selector for DAC

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Two option board slots on the rear panel provide the further versatility of PC audio or vinyl record playback.

Not only the sampling frequency of digital input signal is shown in the multi function display but selecting the digital input and MC/MM setting is also performed on the front panel.