PRECISION STEREO PREAMPLIFIER
C-3900S

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Accuphase introduced the C-2800 in 2002, featuring the groundbreaking AAVA volume system, and has continued to evolve its technology with the times. In 2020, it released the flagship preamplifier C-3900, combining the Dual Balanced AAVA system with ANCC technology.

The new C-3900S is a flagship preamplifier that achieves exceptional sound quality by further enhancing the performance of the C-3900, adopting the latest technologies in both circuit design and mechanical structure, and meticulously selecting materials and components.

The left/right channel volume balance adjustment and compensation function enable finer tuning, pursuing not only improved performance and sound quality but also greater ease of use.

With the C-3900S, enhanced by outstanding circuit technology and new features, enjoy your favorite music to your heart's content.

Dimensions and weight

- Same unit dimensions as the former model

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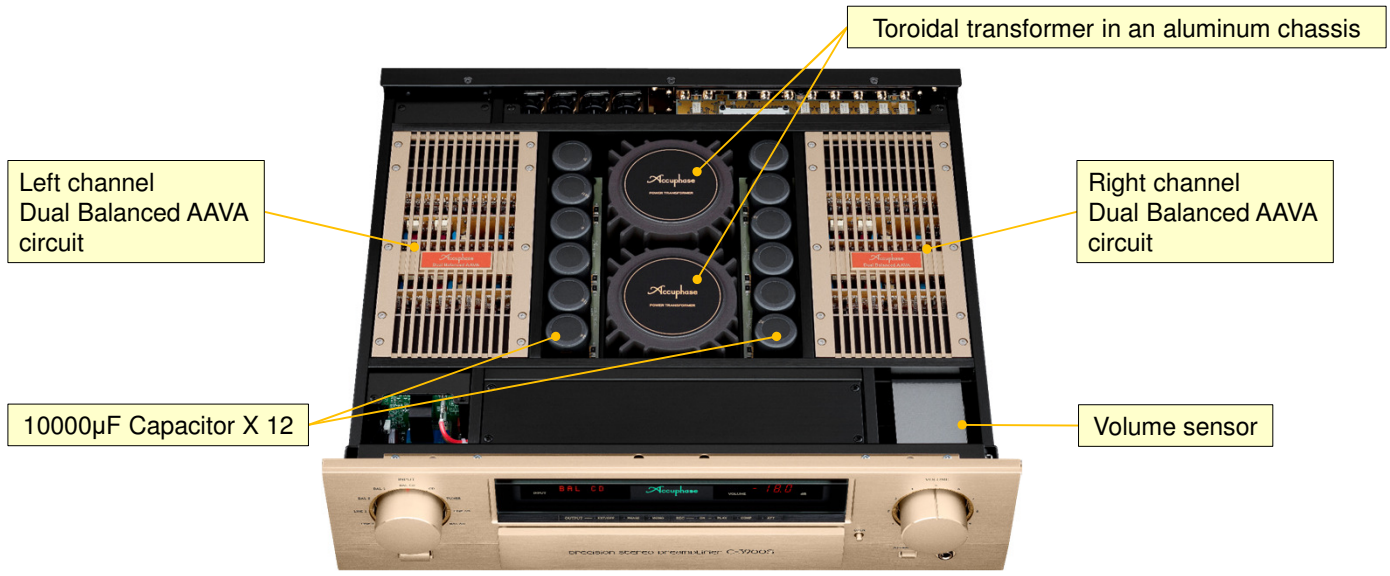
The dimensions of C-3900S are exactly same as the former model C-3900.

The weight of C-3900S is slightly heavier than the former model.

**Weight of C-3900: 24.6kg

Internal view



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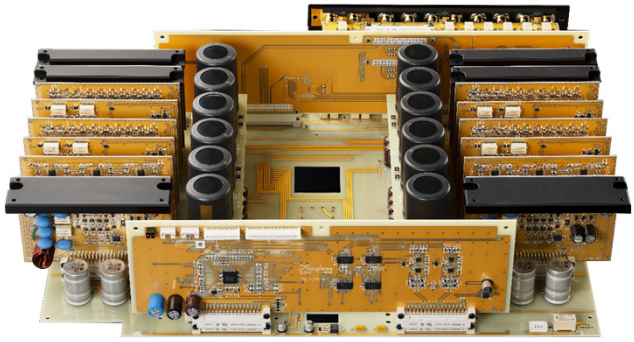
C-3900S inherits C-3900's internal construction as it is.

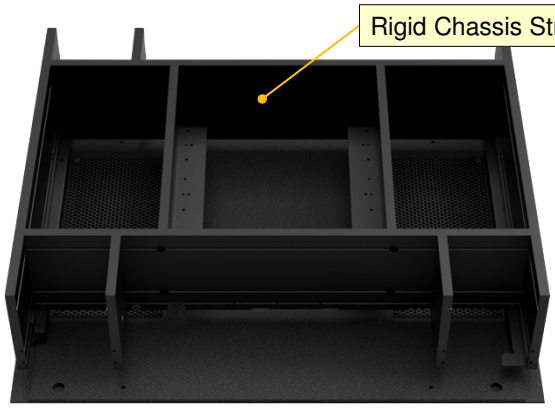
It has a completely symmetric layout centered on a strong power supply by a large toroidal transformer with heat-radiation fins and 12 pieces of custom-made 10000μF capacitors.

Circuit assembly structure

- Fully modular construction
- A robust chassis structure made of aluminum



Modularized preamplifier assembly



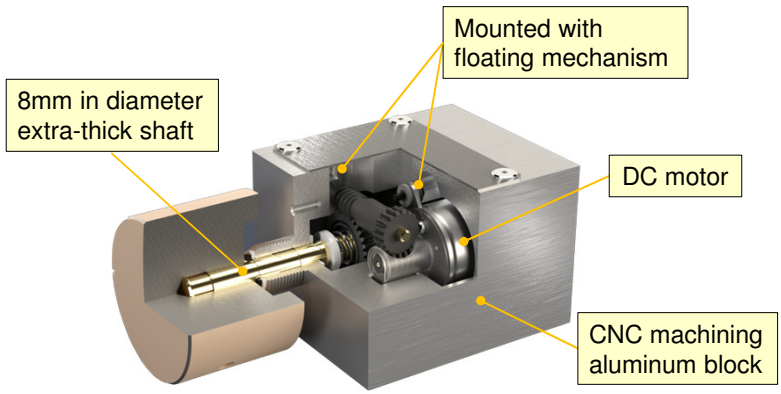
Chassis assembled from aluminum blocks

Amplifier circuits are mounted on gold plated glass cloth fluorocarbon resin PC-board by fully modular construction, which has beneficial effects on the heat dissipation performance and the ease of maintenance.

These electrical circuits are installed on a robust chassis constructed from a rigid case structure made by combining aluminum blocks.

Pursuit of Smooth Operation

- Distinguished operation feeling and reduced mechanical noise
- Custom-made Volume sensor and Input selector



Volume sensor

Input selector

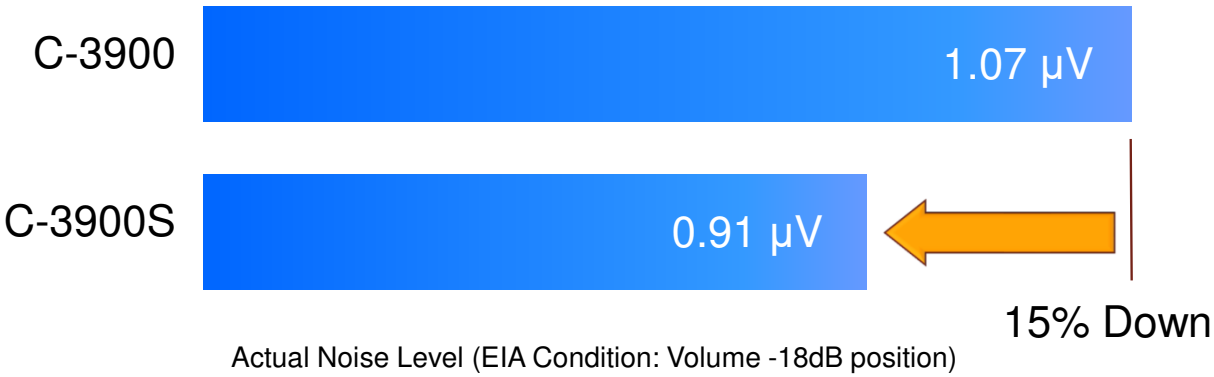
The music signal does not pass volume mechanism. It is just a position sensor to set sound volume.
However, the feeling of the volume knob is very important for audio enthusiasts.

Therefore the volume sensor mechanism of splendid operation feeling was newly developed in C-3800's project.

The input selector is also custom-made to achieve optimal operability and the best possible feel.

Ultra low noise

- 15% lower than the former model
  – Guaranteed EIA S/N: 113dB



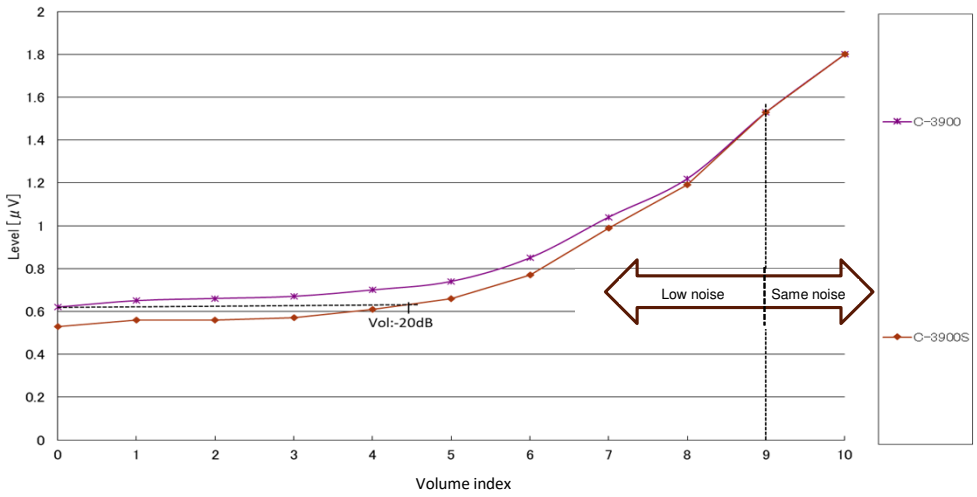
Actual Noise Level (EIA Condition: Volume -18dB position)

C-3900S has the best noise performance in the 53-year' history of Accuphase pre-amplifiers.

Its output noise voltage at the normal volume position is 15% lower than C-3900's figure, which was the world's best performance at that time.

Ultra low noise

- Noise Level Comparison to the former model



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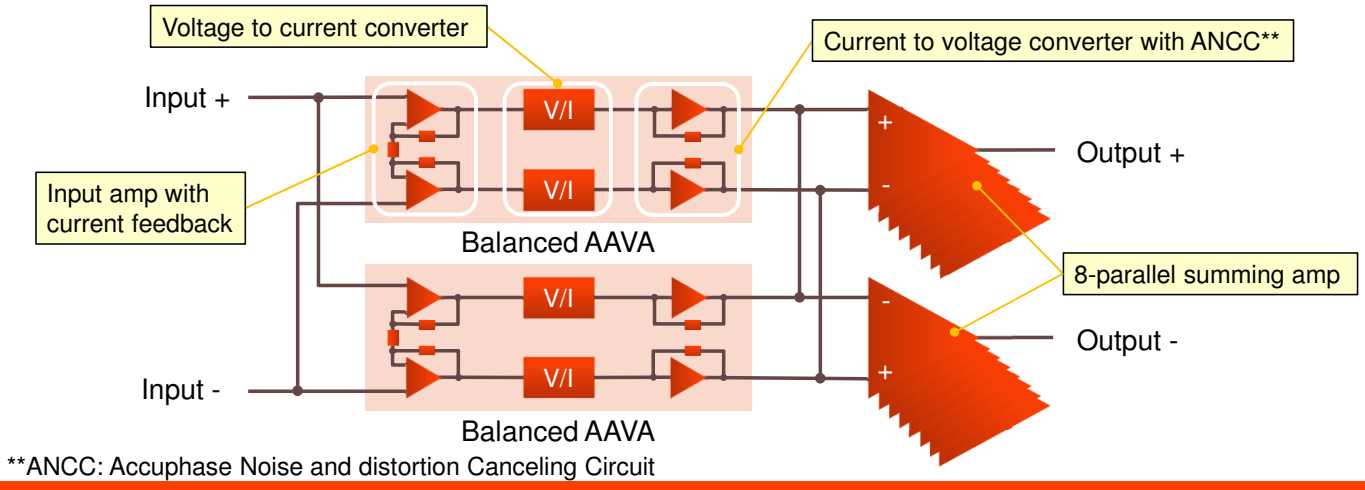
This is a comparison of noise levels relative to volume position with the previous model C-3900.

At maximum volume, the C-3900S's noise level is nearly identical to the C-3900's. However, at all volume levels below 9, the new model's noise level is lower than that of the previous model.

At volumes lower than the 4 to 5 positions typically used in most cases, the noise level is lower than that of the C-3900 at the minimum volume position.

Technology for ultra low noise

- Dual Balanced AAVA
  - Balanced AAVA with two circuits connected in parallel



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

The C-3800 employs two AAVA modules in a fully balanced configuration from input to output.
It's called Balanced AAVA.

The C-3900S evolves this Balanced AAVA further, achieving the "Dual Balanced AAVA" topology. This significantly enhances electrical characteristics by driving two units in parallel, similar to the C-3900.

Technology for ultra low noise

- High-gained Input amplifier
  - High-gained Input amp at the 1st stage of AAVA circuit contributes to reduce overall noise
  - Fully discrete current feedback amplifier

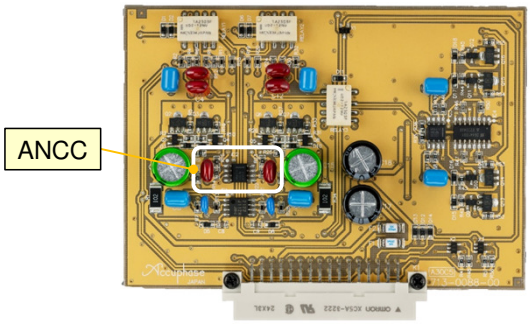
Balanced input amplifier assembly

When the amplification circuits are connected in series as a multi-stage amplifier, the noise characteristic is improved by increasing the amplification degree at the 1st stage.

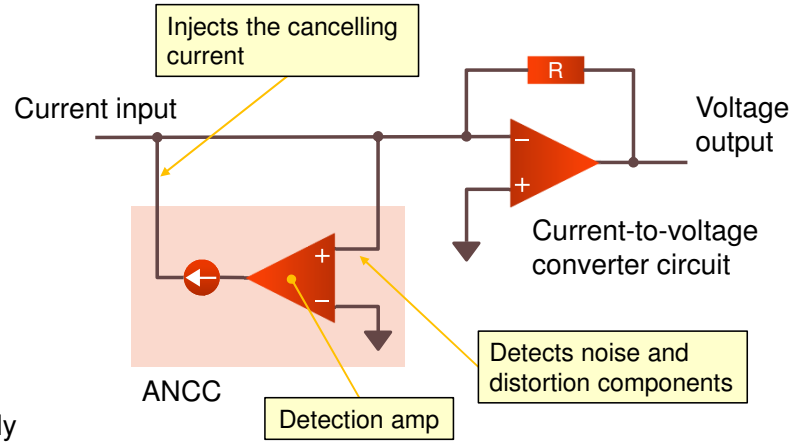
Similarly, for AAVA, the C-3900S optimized C-3900's circuit and achieved the amazing noise performance by applying the high-gain Input amplifier at its 1st stage.

Technology for ultra low noise

- ANCC: Accuphase Noise and distortion Canceling Circuit
  - To detect and cancel the noise and distortion at the input stage of amplifier.



Current-to-voltage converter assembly



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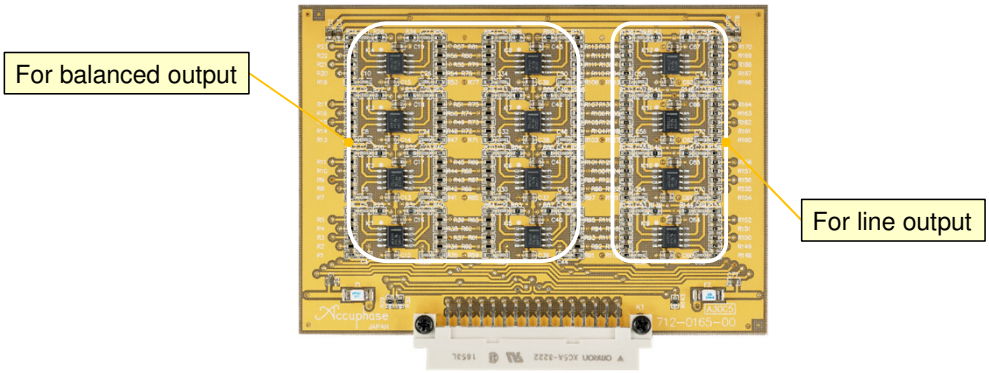
ANCC: “Accuphase Noise and distortion Canceling Circuit” is installed in the current to voltage converter of each AAVA.

Cancelling noise and distortion are realized by detecting the components of noise and distortion at the input stage of an I-V converter module, also by injecting the cancelling current which contains the reversed polarity of those components.

ANCC is a highly effective technology at any volume position.

Technology for ultra low noise

- 8-paralleled summing amplifier
  - The summing amps which enable to decrease the noise by synthesizing each AAVA output are arranged in 8-parallel.



Summing amplifier assembly

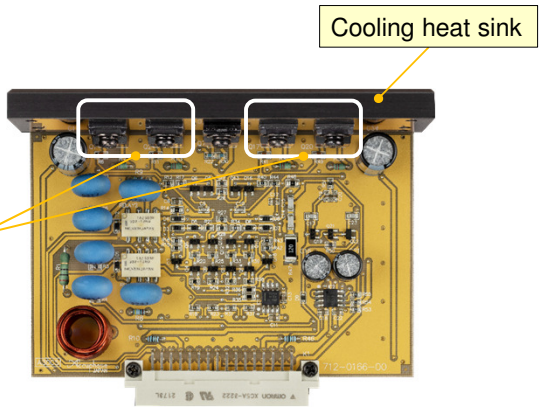
A summing amplifier is used for cancelling noises by synthesizing each AAVA output.

In the C-3900S, 8 paralleled summing amplifiers are mounted on balance-output and line-output, which provides dramatic results for noise reduction.

The theoretical noise generated in the summing amplifier will be 1/ 2.8 (=√8) by this 8 parallel configuration.

Further more …

- Newly designed discrete circuit headphone amplifier
  - Suitable load impedance: 8Ω or above
  - Selectable gain settings: Low, Mid, High
  - Various protection circuits are equipped
- 5-step compensator



Headphone amplifier assembly

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The headphone amplifier of fully discrete circuit with parallel push-pull output stage is newly designed and equipped on C-3900S.
The circuit design of the C-3900 headphone amplifier has been revised to improve noise and distortion performance.

The compensator function, designed to enhance bass during nighttime use or at low volumes, offers five levels of boost effect to choose from.

Additionally, the left-right balance adjustment function now offers 115 adjustment steps, up from the previous 33 steps, enabling finer tuning.