

PRECISION STEREO PREAMPLIFIER C-3900



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1

Since the C-3800 launch as the 40th anniversary celebration in 2010, Accuphase has been evolving its flagship pre-amplifier, and the C-3850 in 2015 received unwavering international reputation from the audiophiles all over the world.

As The 3rd generation of C-3000 series, with the culmination of half a century, C-3900 represent an uncompromising harmony of technology and sensibility, boasting ultimate performance and sound quality.

In the C-3900, the Balanced AAVA principle is further elevated by driving 2 units in parallel, resulting in the Dual Balanced AAVA topology with significantly improved electrical performance.

Experience the ideal image of music playback that C-3900 delivers, that music echoes throughout a space surrounded by absolute silence.

Dimensions and weight

- Same unit dimensions as the former model



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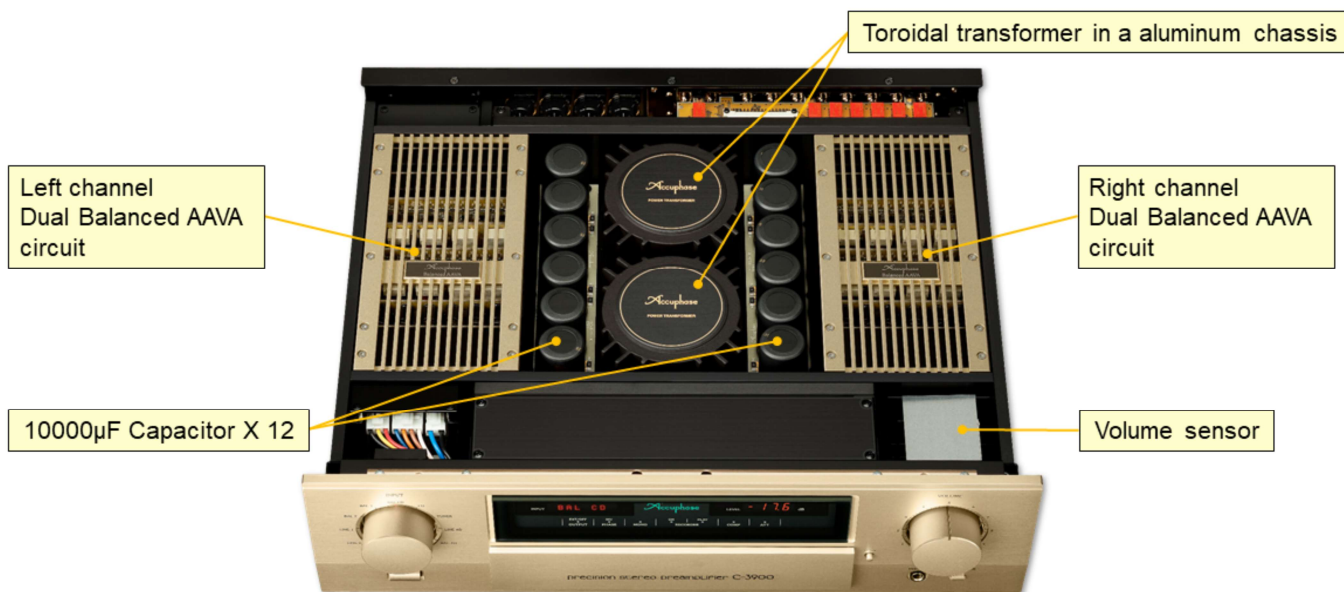
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The dimensions of C-3900 are exactly same as the former model C-3850.

The weight of C-3900 is almost same as the former model as well.

**Weight of C-3850: 25kg

Internal view



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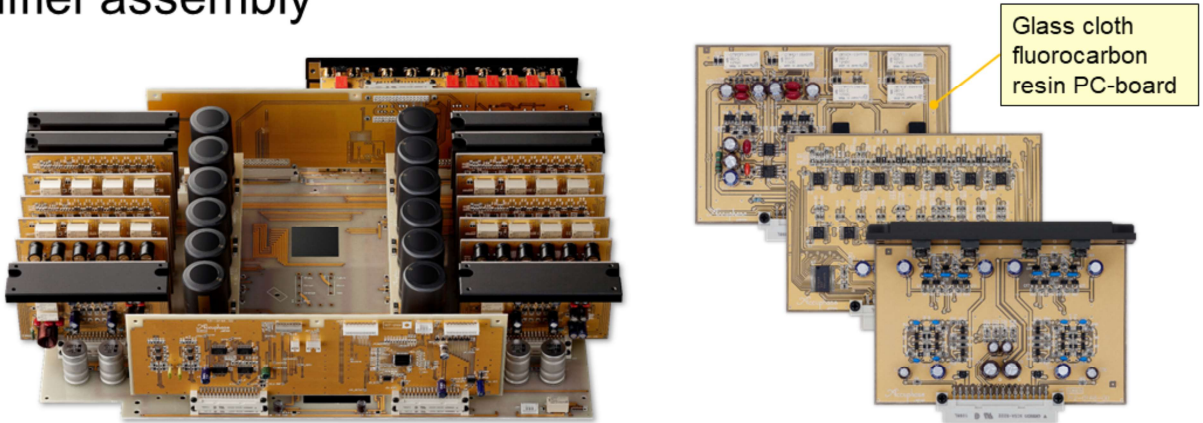
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C-3900 inherits C-3800's internal construction as it is.

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

Circuit assembly structure

- Fully modular construction
- Gold plated glass cloth fluorocarbon resin PC-board for amplifier assembly



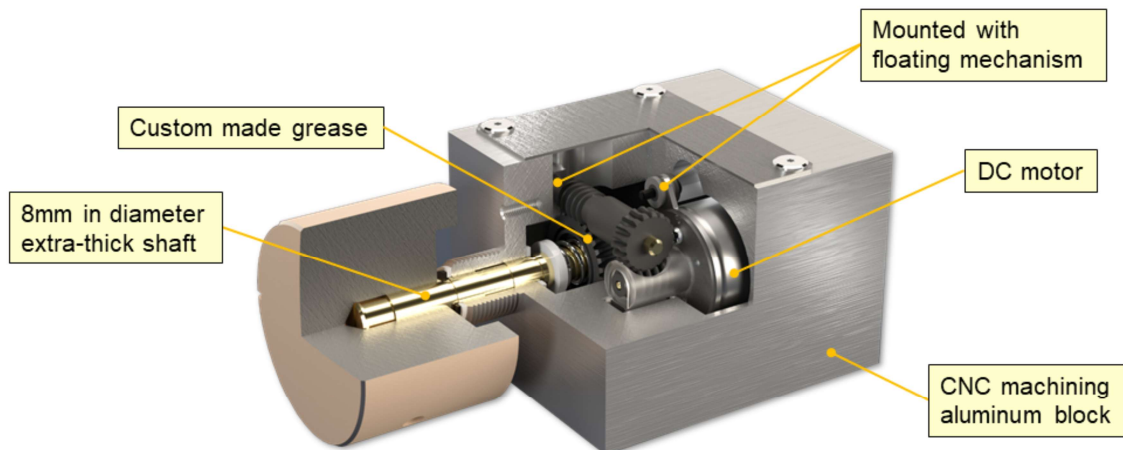
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4

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.

Greatly improved volume sensor mechanism

- Distinguished operation feeling
- Reduced mechanical and motor noise



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5

The music signal does not pass volume mechanism in AAVA and also dual balanced AAVA. It is just a position sensor to set sound volume.

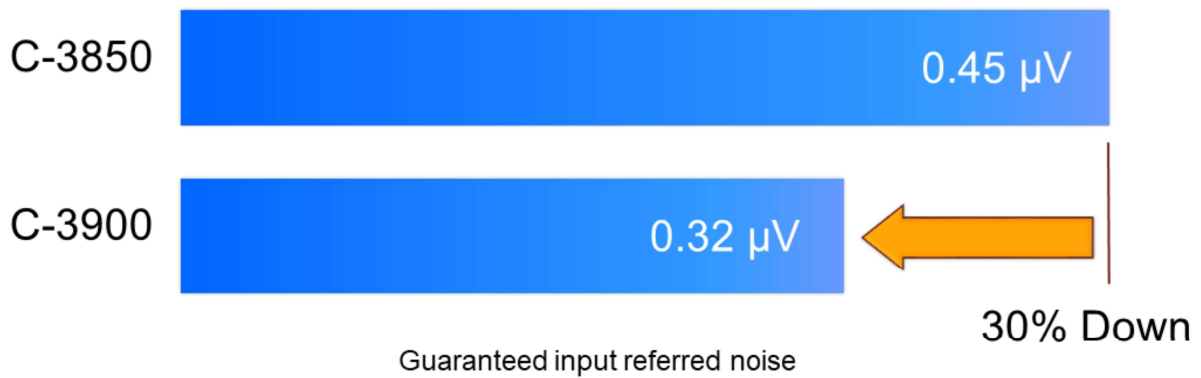
However, the feeling of the volume knob is very important for audio enthusiasts.

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

In the C-3900, the motor and the set of gears are mounted with the floating mechanism, and with the custom-made grease, the knob provides a smooth operation feel and super-quiet volume adjustment.

Ultra low noise

- 30% lower than the former model
 - Guaranteed input referred noise: $0.32\mu\text{V}$ (-130dBV)



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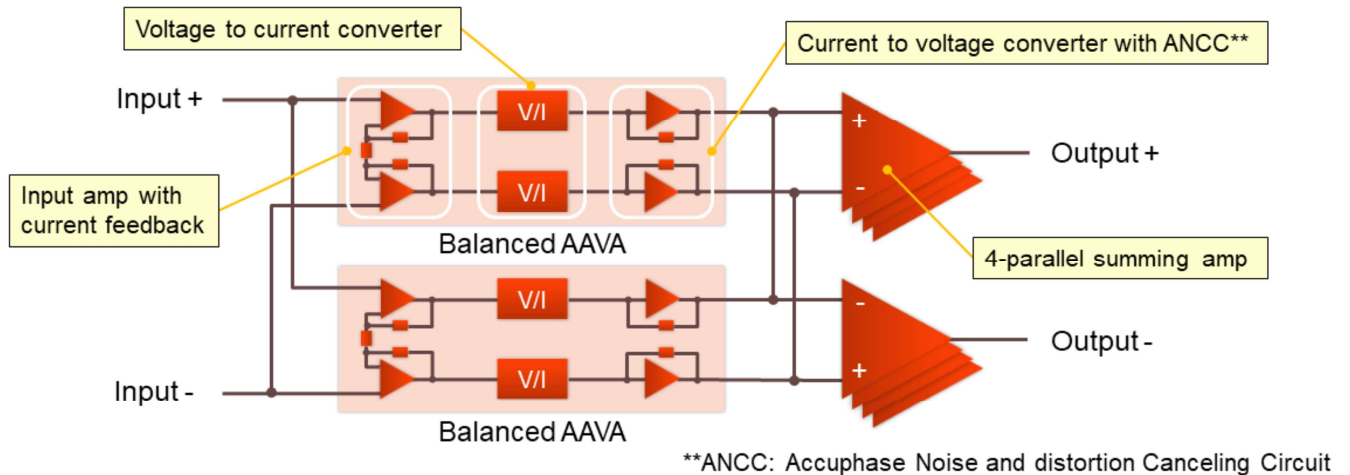
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C-3900 has the lowest noise performance in the 48 years' history of Accuphase pre-amplifier.

Its output noise voltage is 30% lower than C-3850's figure which was the world's best performance at that time.

Technology for ultra low noise

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



**ANCC: Accuphase Noise and distortion Canceling Circuit

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7

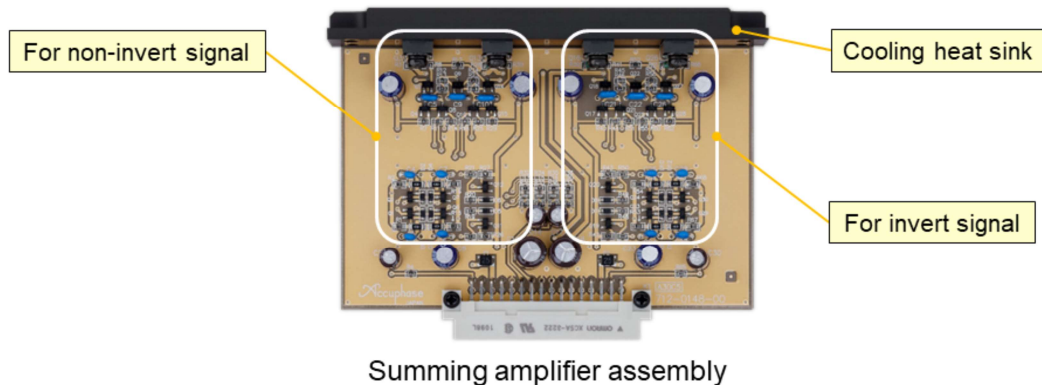
The AAVA (Accuphase Analog Vari-gain Amplifier) is a radically different volume control principle that eliminates all variable resistors from the signal path.

The former model C-3850 employs two AAVA modules in a fully balanced configuration from input to output. It's called Balanced AAVA.

In the C-3900, the balanced AAVA principle is further elevated by driving 2 such units in parallel, resulting in the Dual Balanced AAVA topology with significantly improved electrical characteristics.

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



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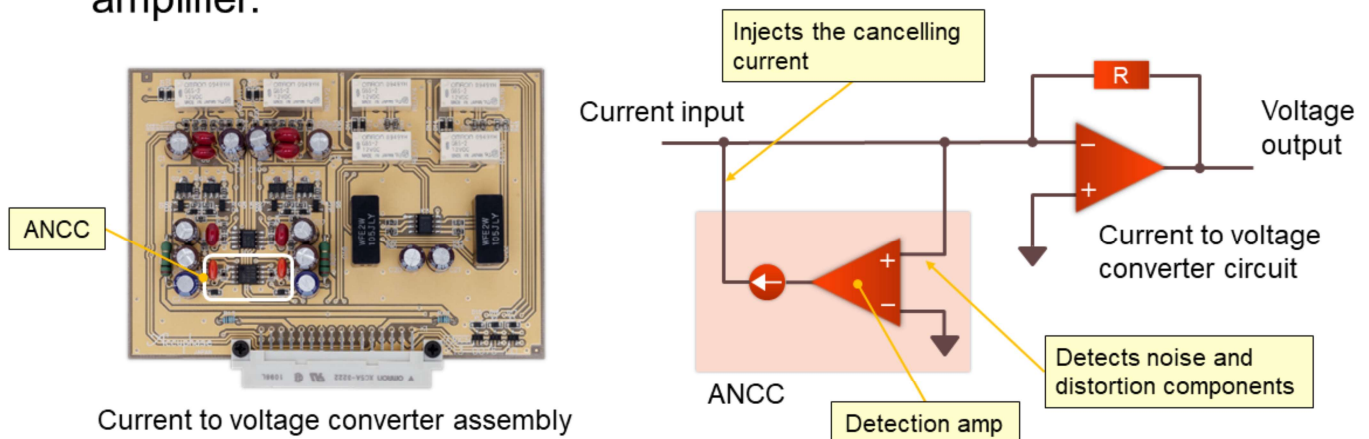
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When the amplification circuits are connected in series as a multi-stage amplifier, the noise characteristic is improved by increasing the amplification degree at the 1st stage.

Similarly for AAVA, the C-3900 achieved the amazing noise performance by applying the high-gained 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.



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9

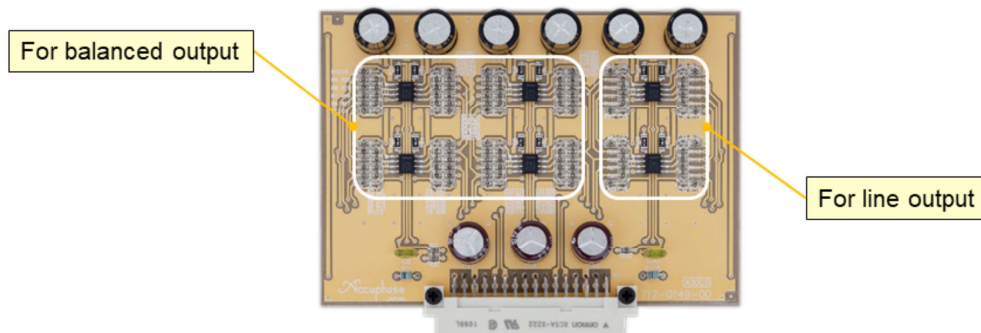
ANCC: “Accuphase Noise and distortion Canceling Circuit” is installed in the current to voltage converter of each AAVA.

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

- 4-paralleled summing amplifier
 - The summing amps which enable to decrease the noise by synthesizing each AAVA output are arranged in 4-parallel.



Summing amplifier assembly

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10

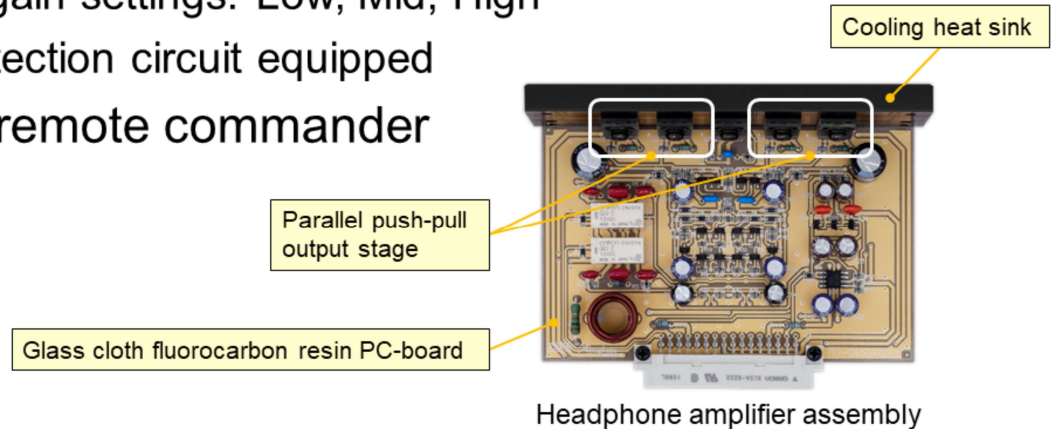
A summing amplifier is used for cancelling noises by synthesizing each AAVA output.

In the C-3900, 4 paralleled summing amplifiers are mounted on balance-output and line-output, this provides dramatic results for noise reduction.

The theoretical noise generated in summing amplifier will be $1/2$ ($=\sqrt{4}$) by this 4 parallel configuration.

Further more ...

- Newly designed discrete circuit headphone amplifier
 - Suitable load impedance: 8Ω or above
 - Selectable gain settings: Low, Mid, High
 - Various protection circuit equipped
- High quality remote commander



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11

The headphone amplifier of fully discrete circuit with parallel push-pull output stage is newly designed and equipped on C-3900.

The adaptable impedance is 8 ohm or above and the gain setting is selectable.

Elegant and high-quality remote commander is supplied with.