

# Precision Stereo Control Center C-2450



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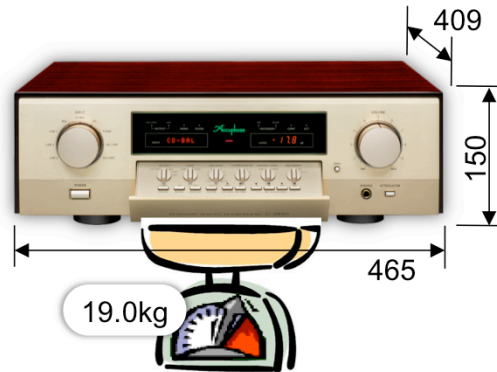
New C-2450 launched inheriting the superior technologies from Accuphase flagship Pre-amp C-3850 and C-2850. Thoroughly seeking the ultimate in the high-fidelity music playback, Accuphase is confident that this C-2450 will make you throw into the world of true musical works and soak up the inspired ambience.

C-2450 is the 4<sup>th</sup> generation high-end pre-amplifier descended from brilliant C-2400 series.

C-2450's technical feature is 10 % lower noise performance than C-2420, achieved by the improved AAVA(Accuphase Analog Vari-gain Amplifier) volume control circuit.

## Dimensions and Weight

- Same dimensions as the former model
  - Width 465 mm
  - Height 150 mm
  - Depth 409 mm
  - Weight 19.0 kg



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The size of C-2450 is as same as the former model C-2420.

## Luxury Exterior Parts

- “Hair-line” finished aluminum top plate



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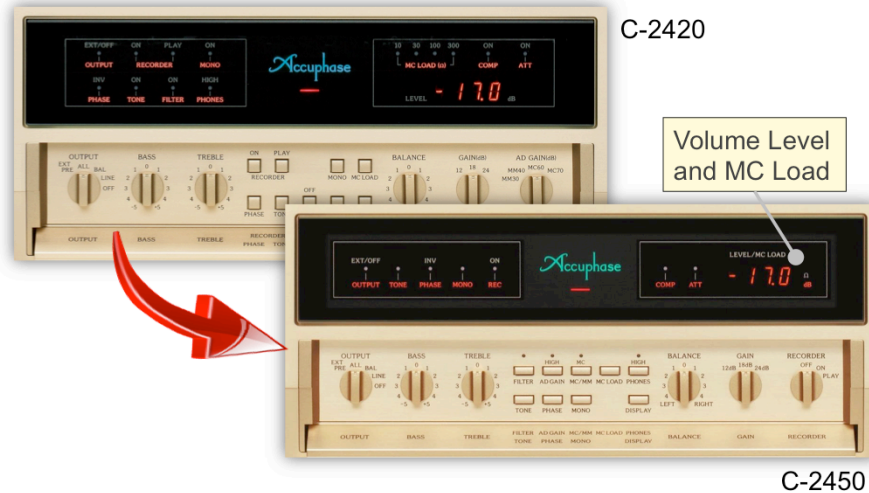
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C-2450 newly applied the aluminum “hair-line” finished top plate. It brings an elegant atmosphere with natural wood grain finished side panels.

\*\*The former model C-2420 used the velvet-coated iron plate .

# Luxury Exterior Parts

- Simple but sophisticated front panel design



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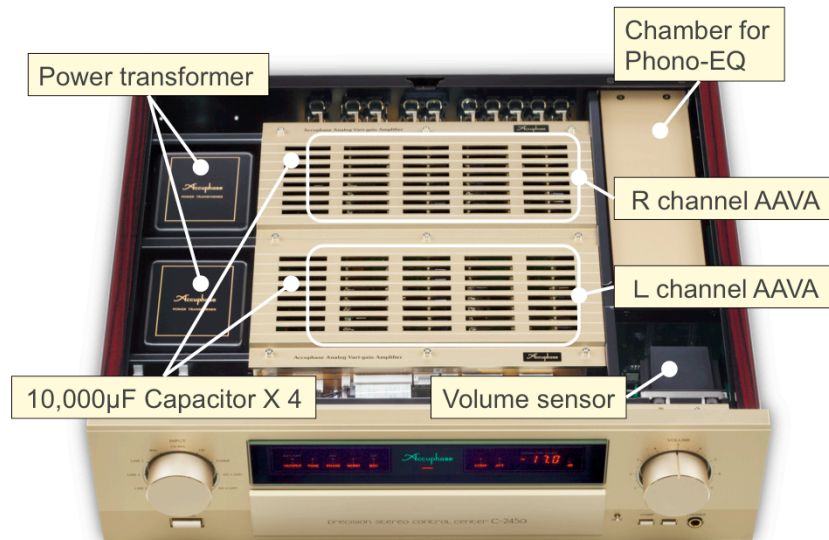
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C-2450 is redesigned the operation display section to simplify and create the sophisticated image.

Level display section is able to show both volume level and MC load setting.

This feature is effective only if the optional dedicated Phono Equalizer Unit (AD-2850, AD-2820, AD-2810, AD-2800, AD-290, or AD-290V) is present.

## Internal view



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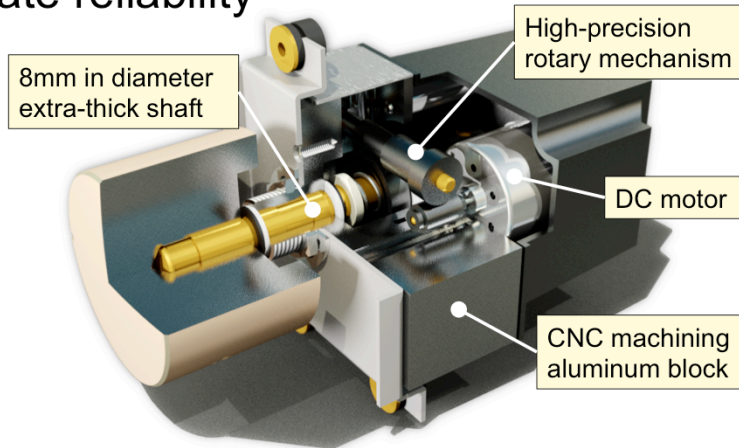
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C-2450 inherits C-2420's internal construction as it is.

C-2450 has the dual monophonic layout with strong power supply comes from large power transformer and 4 pieces of custom-made 10,000μF capacitors.

## Custom-made volume sensor mechanism

- Distinguished operation feeling
- Ultimate reliability



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The music signal does not pass volume mechanism in AAVA. It is just a position sensor to set and adjust the volume level.

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

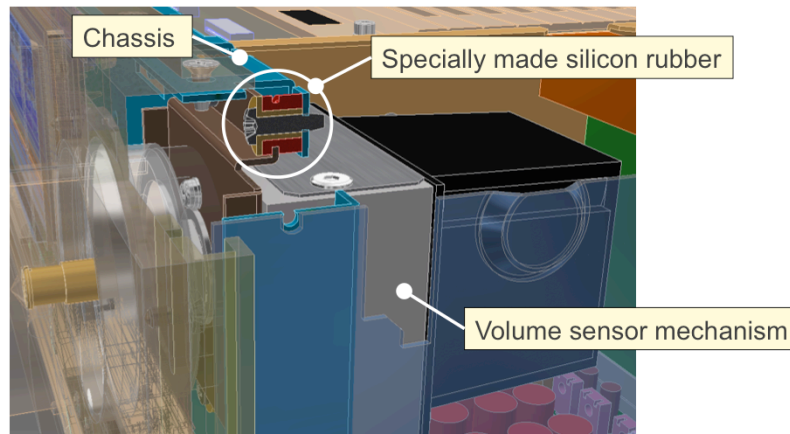
Therefore, the volume sensor mechanism with splendid operation feeling needed to be developed in C-2800's project.

It is built with CNC machining aluminum block, extra-thick shaft and more.

C-2450 incorporates exactly same volume sensor mechanism as C-2850.

## Operating sound reduction

- Volume sensor mechanism is floating from the chassis.



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Former model C-2420 had a small operating noise because the motor's vibration directly came down to the chassis when adjusting the volume with a remote commander.

C-2450 succeeds in reducing such an operation noise by making the volume sensor mechanism float from the chassis to block off the vibration with specially made silicon rubbers.

## Ultra Low Noise

- 10% lower than former model
  - S/N ratio: 110dB guarantee
  - Input referenced noise: -122dBV guarantee



Actual output noise graph @volume -18dB

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The former model C-2420 has excellent noise performance, however, the output noise voltage of C-2450 is 10% lower than even C-2420.

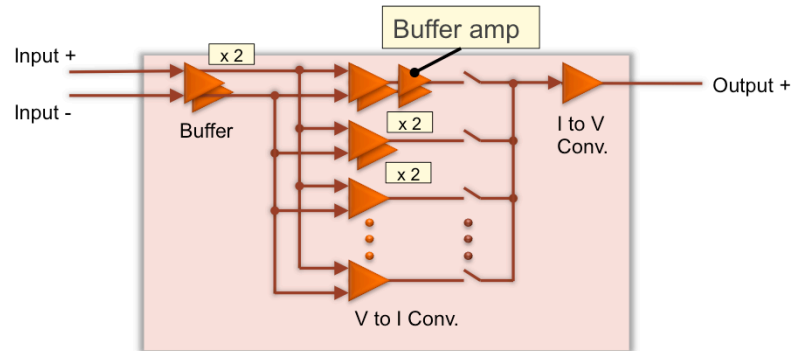
C-2450 guarantees,  
SN ratio: 110dB  
Input referenced noise: -122dBV



# Technology for ultra low noise

- Improvement of AAVA

- Special configuration for upper two V-I converter amps
  - with a special buffer amp for the topmost
  - parallel operation for the upper two amps



Block Diagram of AAVA

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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.

The AAVA module in C-2450 achieves the low noise performance by the special configuration for upper two V-I converter amps.

- With a special buffer amp for the topmost.
- parallel operation for the topmost and the second level.

This newly-adopted buffer amp helps to make the V-I converter amp's output current double, and it results in reducing the value of the feedback resistors and the noise coming from them.

\*\*In C-2420 AAVA module, no buffer amps were used for the topmost V-I converter.

## Further more ...

- Function memory
  - AD1, AD2 input: Memorize Phono EQ settings individually



- High-quality remote commander

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AD1 & AD2 inputs are available only when the dedicated Phono Equalizer Units, AD-2800 series are installed.

C-2450 is able to store the separate phono equalizer settings for each input when AD1 or AD2 input is selected.

An elegant high-quality remote commander is supplied with.

\*\*C-2420 was capable of storing the MC Load value only.

# Dedicated Phono Equalizer Unit

## AD-2850



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AD-2850 is the 4<sup>th</sup> generation dedicated Phono Equalizer Unit.

AD-2850 technical features are 10% lower noise performance than the former model AD-2820 and low RIAA equalization error achieved by Differential RIAA Equalizer configuration.

# Functions

- Gain switchable
  - MC: 60dB, MC: 70dB
  - MM: 30dB, MM: 40dB
- Input impedance selectable
  - MC: 10, 30, 100, 300 ohm
  - MM: 47k ohm

Function buttons on C-2850 sub panel



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AD-2850 is the function-rich Phono Equalizer Unit.

All functions are able to be controlled with the function buttons on the sub panel of pre-amplifier installing the unit.

## Ultra Low Noise

- 10% lower than former model
  - @ MC60dB, MC70dB, MM30dB, MM40dB



Actual output noise graph @MC60dB

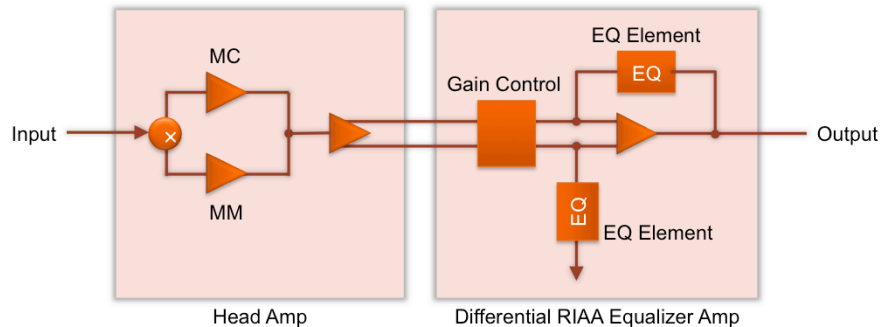
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AD-2850 shows ultra low noise performance.  
Its output noise voltage is 10% lower than the former model AD-2820.

## Block diagram

- Differential RIAA equalizer configuration
  - Low RIAA equalization errors:  $\pm 0.2\text{dB}$ (MC60/70)



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AD-2850 has quite unique configurations, as it consists of two amplifiers, Head Amp and Differential RIAA Equalizer Amp.

The first stage of Head Amp features separate input circuitry, it switches between bipolar-transistor for MC type cartridges and junction-FET for MM type cartridges, and realizes ultra low noise performance.

Differential RIAA Equalizer Amp is balanced input EQ amplifier, it is designed to provide low RIAA equalization errors when changing the AD GAIN value.

## Backward compatibility

- Available model
  - C-2800, C-2810, C-2820, C-2850
  - C-2400, C-2410, C-2420, C-2450
  - C-290, C-290V



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AD-2850 is supported by not only current models but following models for backward compatibility.

- C-2800, C-2810, C-2820, C-2850
- C-2400, C-2410, C-2420, C-2450
- C-290, C-290V

Remarks;

1. MC LOAD impedance  $300\Omega$  is not available for any models other than C-2850, C-2820, C-2450 and C-2420 due to no impedance selector button.
2. For any models other than C-2850, C-2820, C-2450 and C-2420, AD GAIN value should be unified into MC: 60/70dB & MM: 30dB/40dB different from the inscribed values on products.