

# STEREO PHONO AMPLIFIER C-47



Accuphase Laboratory, Inc.

1

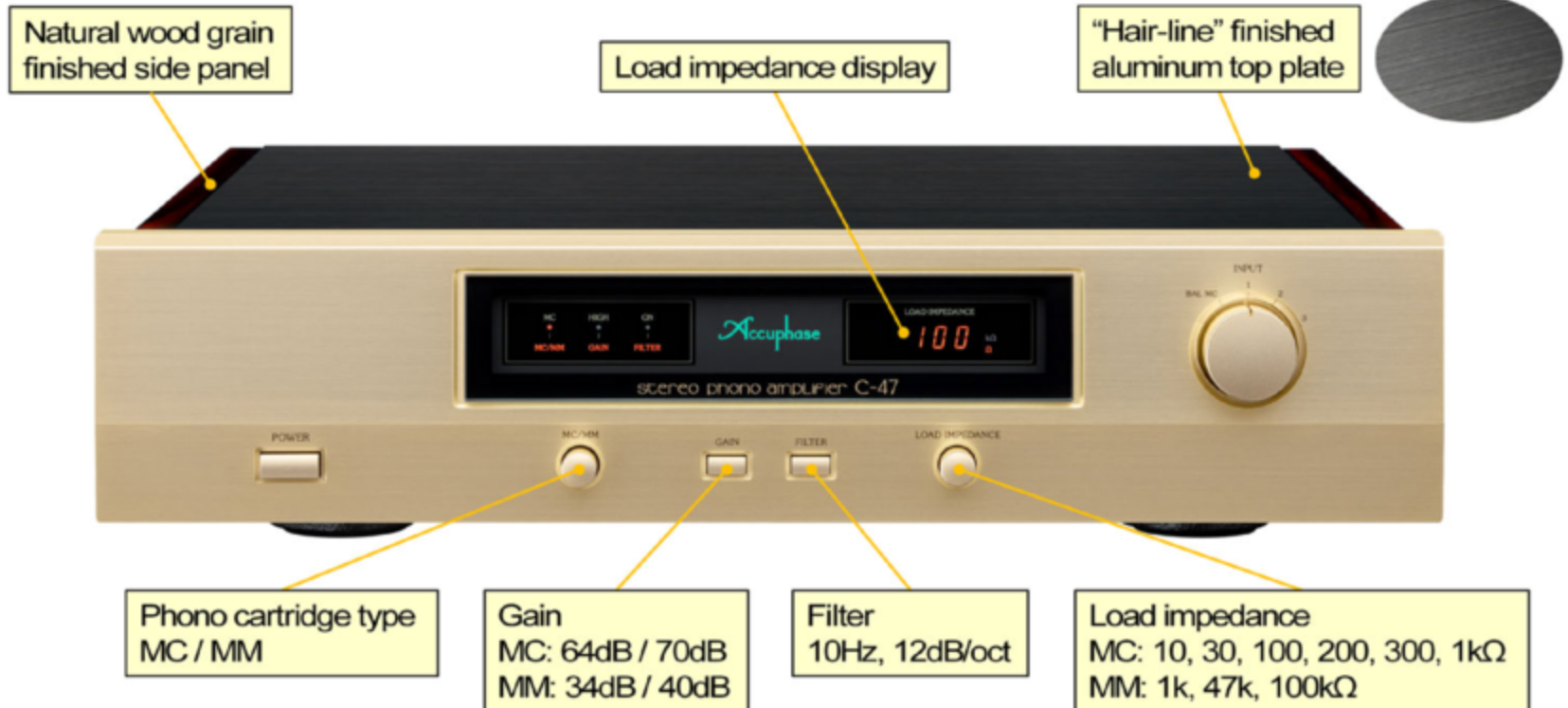
Ever since its beginning, Accuphase has been researching and accumulating considerable expertise in the domain of analog records. The C-27 in 2008 and the C-37 in 2014 are the fruits of labor at that time.

But now, the new C-47 is moving on to another level with a MC cartridge-dedicated balance input, it realizes the balance connection with the analog record player.

In this balanced connection, applying the latest Accuphase technologies, the entire path for the signals from input connectors to the output is a fully balanced construction.

Together with the C-47, which made a great deal of progress with the latest noise reduction technologies, and fully expresses what's great about any phono cartridges, enjoy the new discovery and impressions of analog disc playback.

## Front view



Accuphase Laboratory, Inc.

2

C-47 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-37 used the velvet-coated iron plate .

The numeric display for Load impedance is newly added.

\*\*No numeric display in C-37



In MC connection, the 200 $\Omega$  setting is newly added.

\*\*3 $\Omega$  setting is deleted.

# Inputs and outputs

- Input
  - Balanced x 1 \*\*for MC type cartridge
  - Line x 3
- Output
  - Balanced x 1 with polarity selection
  - Line x 1



Polarity selector



Balanced input

Accuphase Laboratory, Inc.

C-47 has a MC type cartridge-dedicated balanced input, and 3 of pairs of line input connectors.

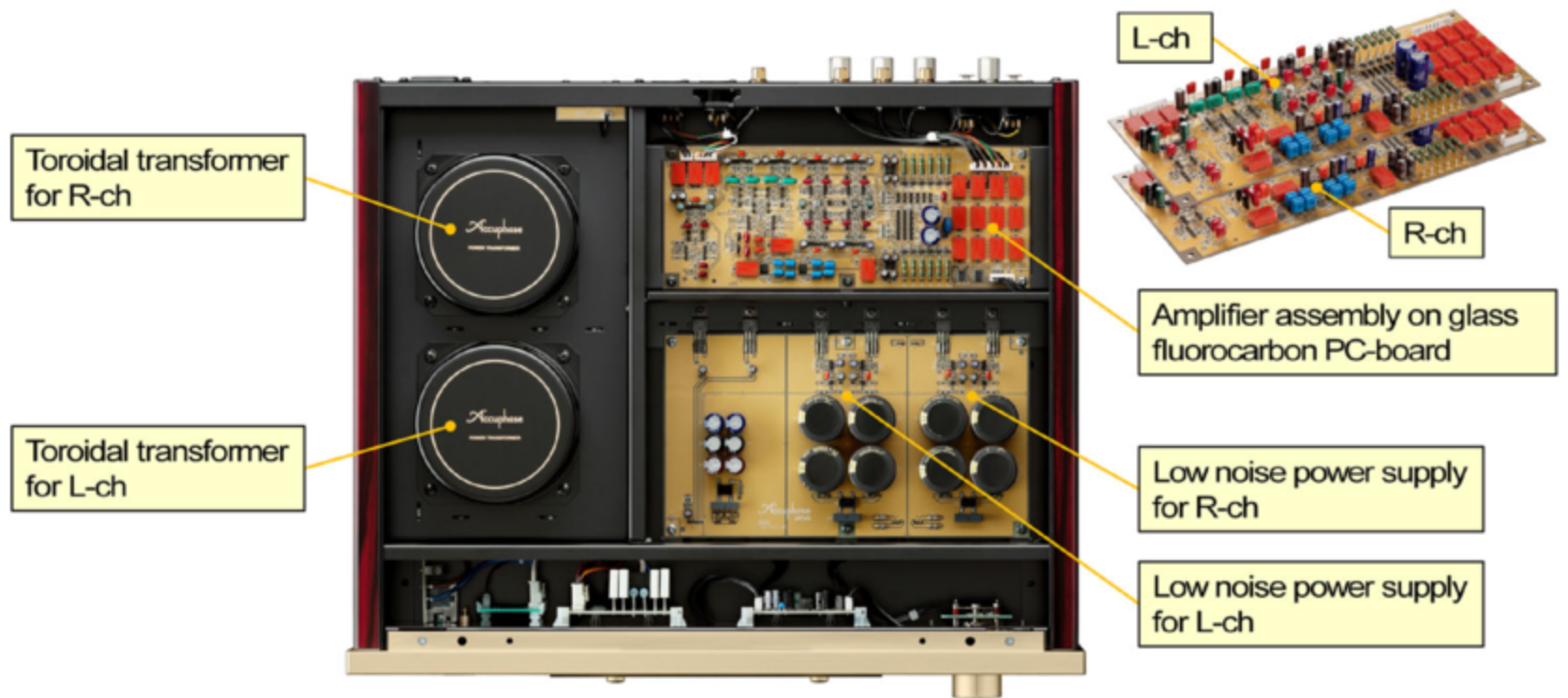
It can memorize each input's individual function settings.



- ① : GND
- ② : +
- ③ : -

\*\*Balance input polarity

## Internal view



Accuphase Laboratory, Inc.

4

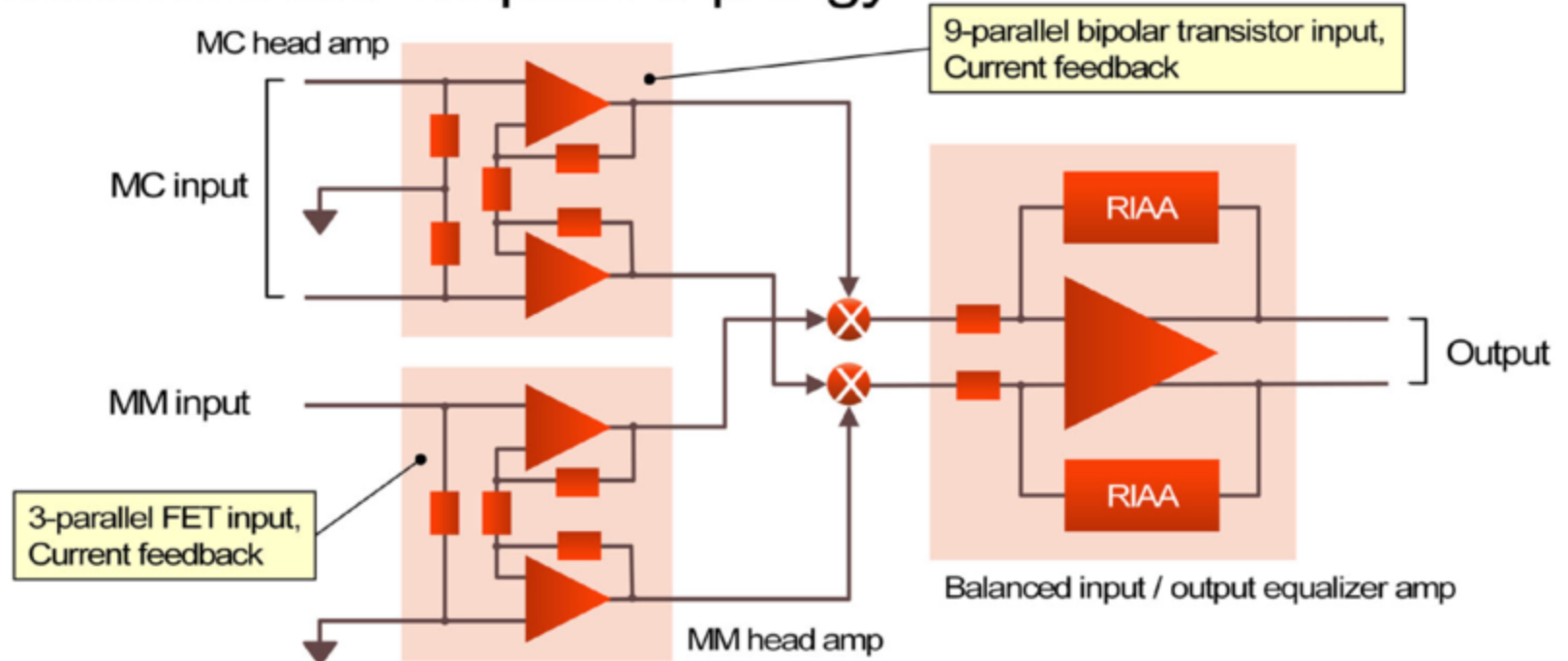
Complete separation design with individual toroidal power transformer and all circuit boards from power supply circuit to equalizer amplifier circuit for left and right channel.

Amplifier circuits are mounted on glass fluorocarbon PC-board.

C-47 is equipped with Low flux leakage & high-capacity toroidal transformers and ultra low noise power supply circuits consisting of 8 electrolytic capacitors of 15000 $\mu$ F capacity.

# Fully balanced configuration

- Instrumentation amplifier topology



Accuphase Laboratory, Inc.

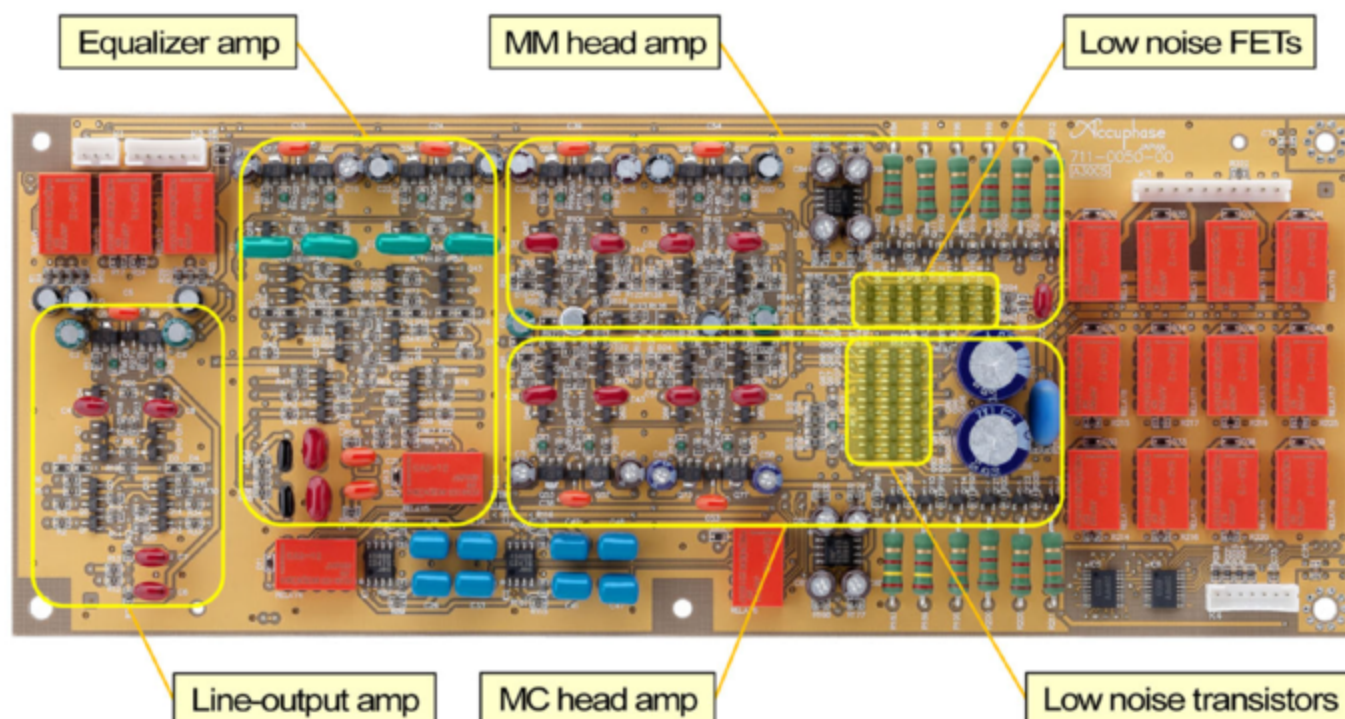
5

C-47 applies the latest technologies which are used in C-3850 or E-800 for ultra low noise characteristics, and realizes the fully balanced constructions. Also, the instrumentation amplifier topology contributes achieving the fully balanced input at both MC/MM connections.

The head amps are optimized with depending on the type of cartridge, this also helps to show the ultra low noise performance.

- MC head amplifier
  - 9-parallel low noise bipolar transistor input
  - Current feedback
- MM head amplifier
  - 3-parallel low noise junction FET input
  - Current feedback

# Amp assembly on glass fluorocarbon PC-Board



Accuphase Laboratory, Inc.

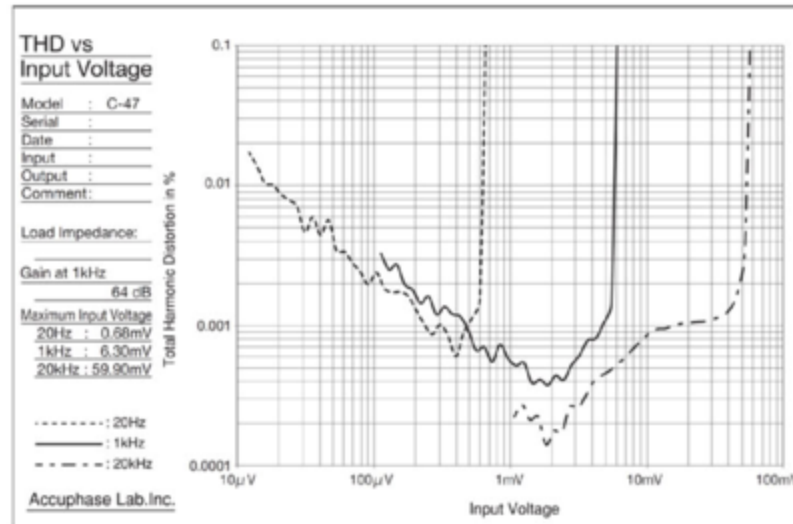
6

The signal paths among the circuits are shortened as much as possible and all amplifiers located on the same PC-Board brings out the best electrical performance and sound quality.

The PC-Boards are glass fluorocarbon substrate which is excellent in the high-frequency characteristics and the heat resistance.

# Ultra high performance

- Guaranteed input Referred Noise
  - -155dBV @MC, -136dBV @MM
- THD performance



Accuphase Laboratory, Inc.

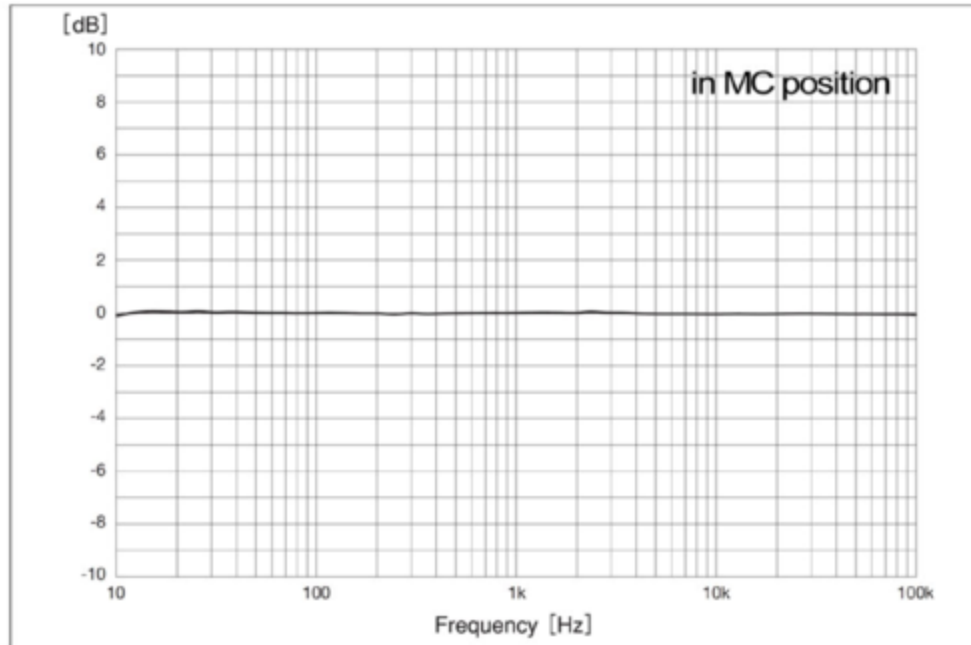
7

C-47 shows astonishing low noise and THD (Total Harmonic Distortion) characteristics.

This performance can be said to be a World-Champion-Class quality.

# Ultra high precision

- RIAA deviation:  $\pm 0.3\text{dB}$  guarantee @10Hz ~ 20kHz



Accuphase Laboratory, Inc.

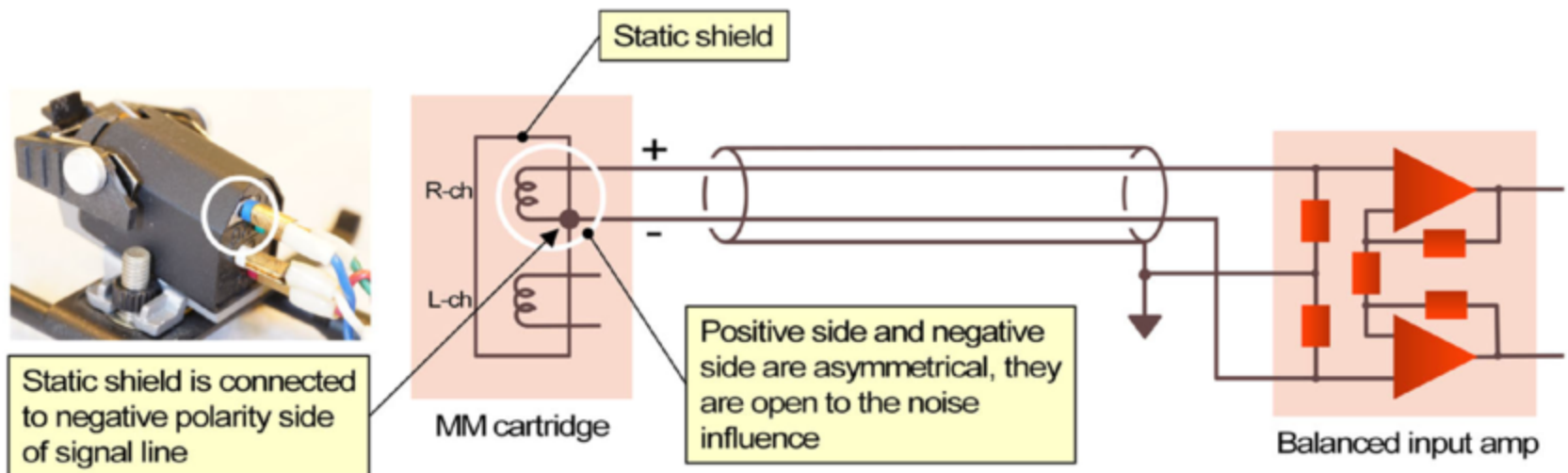
8

C-47 guarantees RIAA deviation only  $\pm 0.3\text{dB}$  with selected high-precise capacitors and resistors.



# Appendix

- The reason why MM cartridge cannot do the balanced connection  
-MM's Balanced connection is open to the noise influence rather than line connection



Accuphase Laboratory, Inc.

9

The most of MM type cartridges have static shield at power generator, and the static shield is connected to the negative polarity side of either channel.

If MM type cartridges are set to the balanced connections, The noise amount at positive polarity side and negative polarity side inside the cartridge is varied.

The noise cancelling effect at balanced input amp cannot be occurred, therefore MM's Balanced connection is opened to the noise influence rather than line connection.