

# **OWNER'S MANUAL**

**Power Amplifier**  
**Model 4706 GAINCARD**  
**With Model 4700 POWER HUMPTY**

**47Laboratory**

## Introduction by the designer, Junji Kimura

Model 4706 GAINCARD was originally created as a reference amplifier of 47Laboratory. Behind it was my frustration about the way music was reproduced through Compact Disk.

People often remark that analog playback is superior to CD playback in retrieval of details and recreation of the ambience of the recording venue, and they fault the CD for these shortcomings. While today's CD format is far from perfect, it still contains an amazing amount of information on it.

The problem is not with the CD itself. The problem is with the equipment we use: playback systems are not capable of properly retrieving the informations in the CD, and amplifiers are still designed based on the concept of analog playback.

To overcome these problems, we had to reevaluate the fundamentals of the CD transport and DAC, and also had to create a new-concept amplifier that would meet the specific requirements for digital reproduction of music.

In digital music reproduction, the following characteristics of an amplifier are sharply reflected in the recreated sound:

- # Response to the transient speed of the signal
- # Response to small-level signals
- # Severity of left and right channel symmetry

When I began to design Model 4706, I knew I could not depend on current standard of amplifier design.

In Model 4706 GAINCARD,

# The signal pass length is as short as possible.

#The energy supply depends on the capacity of the electrical transformer instead of the capacity of the condenser.

# The capacity of the electrical condenser has been minimized to avoid electrical energy storage.

# The chasis is light and rigid to avoid mechanical energy storage.

# Interference between left and right channels has been eliminated.

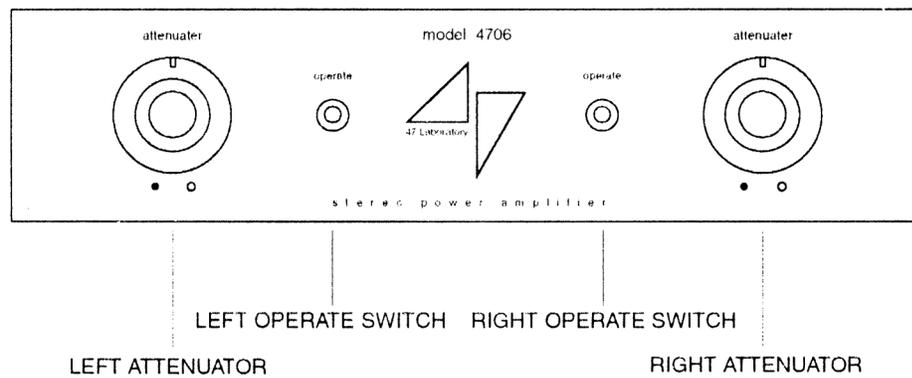
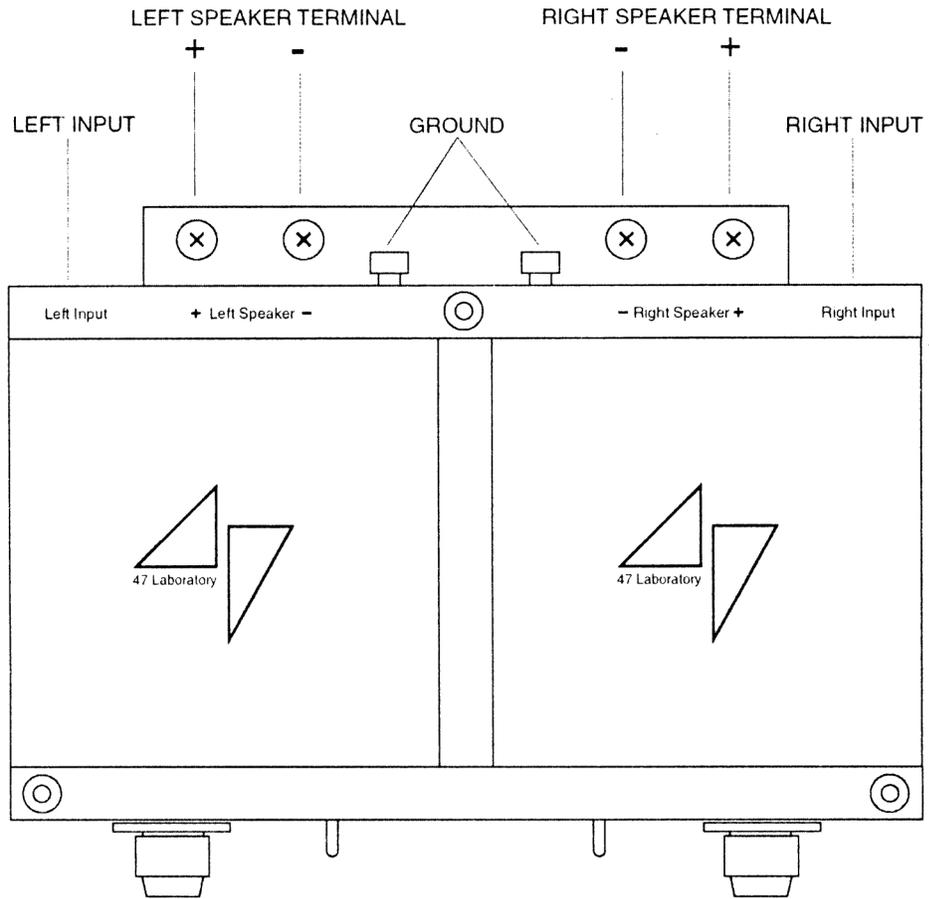
# Complete symmetry between the signal pass of each channel, symmetry in the layout of the parts and in the operation of each channel has been achieved.

Model 4706 GAINCARD finally fulfills my goal to create a design for the digital age.

47Laboratory  
President

Junji Kimura

# Model 4706 GAINCARD



## **Package List**

Model 4706 GAINCARD  
Model 4700 POWER HUMPTY  
Spike Receptor (3)  
Model 4700 rests (2)  
Additional Fuse (1), inside the fuse box  
Owners Manual

## **Setting and Operation**

### **1. Connecting the amplifier to the power supply.**

Plug the two connector cables of the amplifier into the receptor located at the rear panel of the power supply. Make sure to push them into the receptor until they lock firmly. There is no specific left-right combination.

### **2. Connecting speaker cables and line cables.**

Speaker cables should be connected properly to each left and right + and - terminal using Phillips screwdriver for loosening and tightening the terminal.

Line cables should be connected to each RCA terminal.

### **3. Connecting power cord.**

Make sure the “operate” switches on the front panel of the amplifier are in the off (down) position. Turn down the volume attenuator all the way counter-clockwise. Connect the power cord to the receptor at the rear panel of the power supply. The LED lamp on the front panel of the power supply will light up, indicating that the power is on.

#### **4. Start the music!**

Turn the operate switch on (up). Turn the attenuators clockwise to your choice of sound level.

##### ***# Operate switches***

Operate switches connect the amplifiers to your speakers. At the off position, the amplifier is disconnected from the speaker and no current runs into them. At the on position, current flows into the speakers. Using this switch allows you to avoid disconnecting the amplifier from the power supply each time you change the connection of line cables and/or speaker wires.

#### **5. Turning it off**

Turn down the attenuators to the minimum position. It is designed not to turn down to zero, so you will still hear a low volume of the sound at the minimum position. Turn off the operate switches.

*# We recommend that you leave the power on unless you are not planning to play your system for a long period of time, a vacation, say. This keeps the amplifier at certain warmth, making the warm-up time shorter when you start again.*

# Notes

## About break-in

A brand new amplifier requires several hours of running with actual music signals to start making them into music. We suggest 50-100 hours of break-in period to reach its maximum performance.

## Thermal protection

This amplifier has a thermal protection in each left and right circuitry to protect them from heat resulting of continuous high-load operation. When the temperature inside the amplifier reaches its programmed point, the thermal protector is automatically activated and shuts the circuit down. When this happens, you can turn off the amplifier or leave it until the temperature drops and reconnects the circuitry automatically. Since each channel has a separate thermal protector, it will not be activated at the same time.

## Specifications

Input impedance:	22 kOhm
Output power:	25w+25w (8Ohm)
Attenuators:	left and right separate, Individual L-pad type
Input:	1pair (unbalanced)
Fuse:	5A
Measurements:	4706 170 (w) x 100 (d) x 40 (h) mm 4700 130 (Ø) x 195 (d) mm

# Warnings

Any attempt to open the casing and/or tempering with the circuit without proper instructions from the manufacturer or certified dealers/distributor will invalidate the warranty.

The amplifier can get quite hot after a continuous operation. Please be careful when you touch it under these circumstances.

This product is designed for home audio use only. We are not responsible to the cause of any improper use of this product.

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