

Owner's Manual

EA-1000

PHONO AMPLIFIER

Phasemation

Thank you for purchasing Phasemation product.
Read your Owner’s Manual thoroughly for proper operation before starting to use your equipment.
Please keep your Owner’s Manual with caution.









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Safety Instructions

Before starting to use

In this owner's manual and on the product, various pictures are used to show our customers how to use Phasemation EA-1000 safely and properly in order to avoid the loss of customer's assets and to protect our customers from harm.

 WARNINGS	■ Do not use the equipment being broken.	 	● In case of using the equipment in an abnormal state, such as seeing smoke, having strange smell and hearing unusual sounds or noise, this can result in a risk of fire or electric shock. If such an abnormal state occurs, turn the power switch off, and endure to disconnect the AC plug from the outlet. After no smoke is confirmed, ask dealer for the repair.
	■ Never remodel the equipment.		● Do not disassemble the equipment or do not remodel it. This can result in a risk of fire.
	■ Never install the equipment near water.	 	● Do not use the equipment in the bathroom. This can result in a risk of fire or electric shock. ● The equipment is designed for using indoors. Do not expose the equipment to water. This can result in a risk of failures, fire and electric shock.
	■ Never put an object filled with water on the equipment.		● Do not put a vase, flower pot, glass or any object filled with skin lotion, chemical or water, or small metal object on the equipment. In case the liquids are spilled or the small objects fall inside the equipment, this can result in a risk of fire or electric shock.
	■ Never put an object inside the equipment.		● If a foreign object has fallen inside the equipment, turn the amplifier's power switch off, and contact the dealer. To keep using the equipment can result in a risk of fire and electric shock.

 CAUTIONS	■ Cautions of Installation		● Do not install the equipment on the unstable tables or unstable places. In case the equipment falls, it can result in a risk of injury of customers. ● Pay attention to the wiring of the cord so that a foot is not caught, or the person can stumble or the equipment can fall, which is so dangerous. ● When moving the equipment, turn the power switch off, and endure to disconnect the power plug from the outlet and remove the connecting cord. The cord can be damaged and this can result in a risk of fire and electric shock.
	■ Places which are not suitable for installation		● Do not install the equipment in the humid or dusty environment. This can result in a risk of fire or electric shock.
	■ Connection		● When connecting with other audio equipment or a television set, read the manual of equipment, turn the power switch off, and connect according to the instructions.

Usage Cautions

Installation place

In order to use the equipment for a long time, follow the instructions shown in below:

- Do not install this equipment near a heat source such as direct sun light, a stove and so on.
- Do not use this equipment at a poorly-ventilated, humid or dusty place.
- Do not install this equipment at an unstable place such as slope or vibrating place.
- Do not install this equipment near the window where the equipment can be exposed to rain.
- Do not install this equipment in high humidity environment.
- Avoid using this equipment on equipment generating heat such as an amplifier.
- Keep this equipment away from a power supply transformer or motor of other equipment.

Note

Avoid covering the equipment with the cloth or installing it in enclosed space because radiation and air convection from the chassis surface can be hindered.

To prevent external sound pressure, grit and dust from entering the equipment, inspiratory/exhaust ports to radiate the heat are not arranged against the equipment consciously. Radiating the heat from the equipment is realized by cooling with air convection in the chassis and with radiation and air convection from the chassis having high thermal conductivity.

Useable AC power supply voltage and frequencies

- AC 100V power supply must be supplied.
- The equipment operates normally in the both areas of 50Hz and 60Hz power supply frequencies.

Handling of AC power cable

- Do not touch the AC power cable with the wet hands.
- Do not pull the cable strongly or do not bend the cable. The cable can be damaged and can result in a risk of fire and electric shock.
- Use the AC power cable of the accessories.

Repair

- In the case of the equipment failure, consult the dealer.

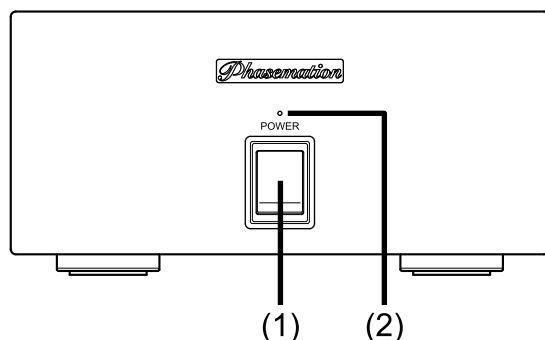
Care of Equipment

- ◎ If the equipment is covered with dust or dirt, clean it with a soft cloth.
- ◎ If the equipment is covered with heavy dust, put a very thin mild detergent on a soft cloth. Wring the cloth and wipe off the dust and dirt. Then, clean with a dry soft cloth.
- ◎ Never use chemical agents such as thinner, naphtha and alcohol when cleaning it. If any of them is attached to the equipment, the silk printing can be flaked or the surface can lose metal luster.

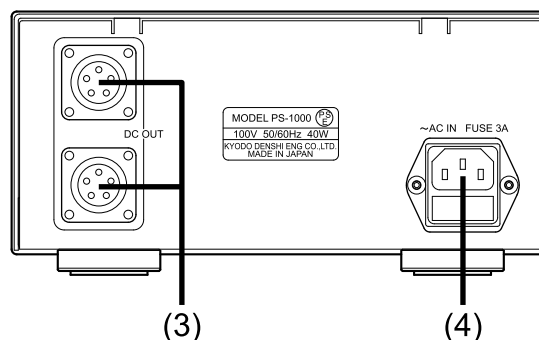
Names and Functions

Power Supply Unit

Front Panel (Power Supply)



Rear Panel (Power Supply)



(1) POWER switch

The power supply can be turned on or off by pressing the POWER switch.

(2) POWER indicator

The POWER indicator lights up blue when the power supply is supplied.

(3) DC OUT

The DC power supply is supplied from two connectors to the L and R Phono Equalizer units through two DC power junction cables of accessories. L and R are not assigned to two connectors.

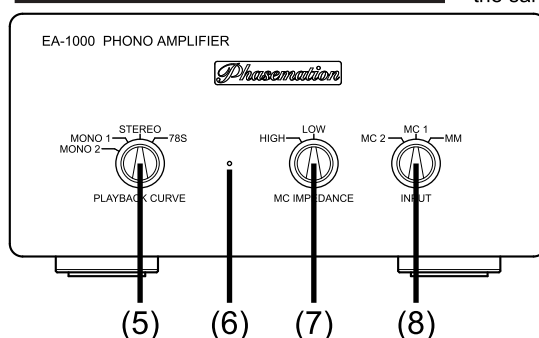
(4) AC IN

Connect the AC power cable of accessories to the AC INLET of the Power Supply Unit, and plug it in an outlet.

Phono Equalizer Units

Front Panel (Phono Equalizer)

* The L and R Phono Equalizer Units have the same front panel.



(5) PLAYBACK CURVE switch

The playback equalizer curve can be selected with this switch.

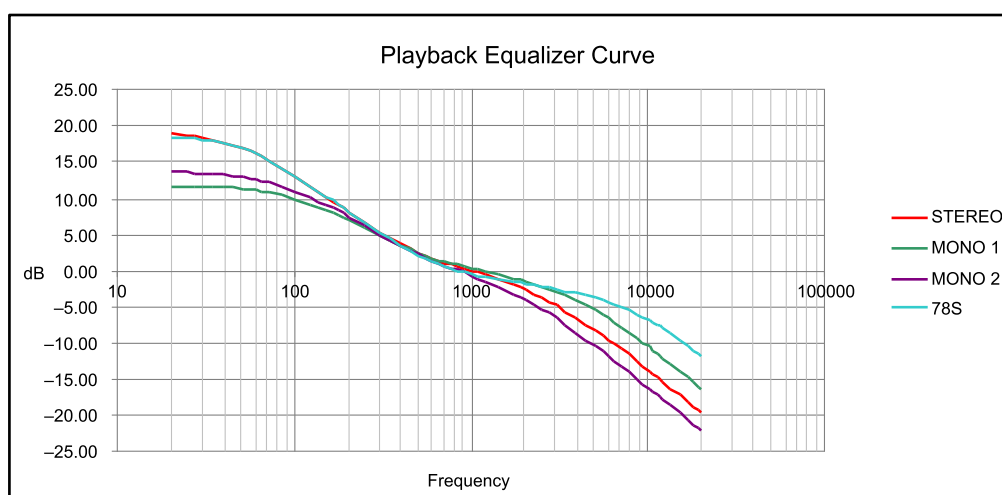
The respective Phono Equalizer Unit has four built-in playback equalizer curves.

You can switch it to the selection matching the type of your record.

- STEREO: RIAA curve for playing a stereo LP record
- MONO 1: Curve 1 for playing a Monaural LP record (For DECCA label and so on: FFRR)
- MONO 2: Curve 2 for playing a Monaural LP record (For Columbia label and so on)
- 78S: Curve for playing a 78 rpm SP record

Playback Equalizer Curve Settings

Curve	Turnover/Low limit	Roll off
STEREO	500Hz/50Hz(+20dB)	75 μ s-2120Hz(−13.75dB at 10kHz)
MONO 1	500Hz/125Hz(+12 to 12.5dB)	50 μ s-3000Hz(−10.5dB at 10kHz)
MONO 2	500Hz/100Hz(+14dB)	100 μ s-1590Hz(−16dB at 10kHz)
78S	500Hz/50Hz(+20dB)	−6dB at 10kHz



(6) POWER indicator

The POWER indicator lights up blue when the power supply is supplied.

(7) MC IMPEDANCE switch

You can switch it to the selection matching the impedance of MC cartridge.

- Low: MC cartridge impedance: 100 ohms or less
- High: MC cartridge impedance: 100 ohms or more

(8) INPUT switch

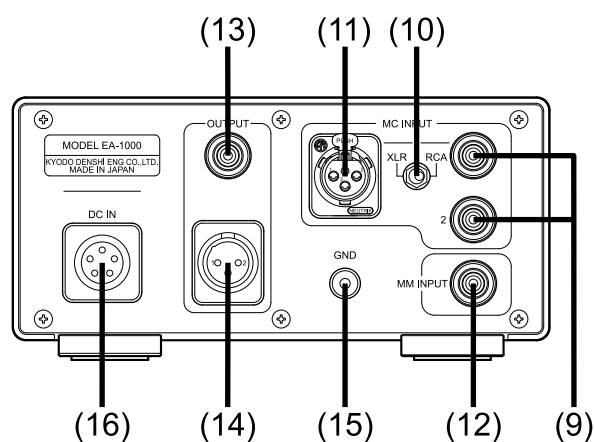
You can switch it to the desired input terminal selection.

- MC1: Input terminal for MC cartridge: RCA (Unbalance)/XLR(Balance), selectable
- MC2: Input terminal for MC cartridge: Only RCA (Unbalance)
- MM: Input terminal for MM cartridge: RCA (Unbalance)

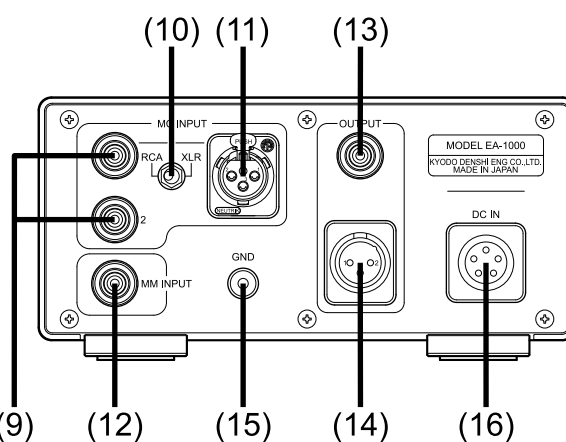
Caution

When operating the respective switches, a noise is heard; so, before switching them, turn the power of this equipment to OFF or decrease volume of the connected amplifier.

Rear Panel (Right Phono Equalizer)



Rear Panel (Left Phono Equalizer)



(9) MC INPUT 1, 2 (RCA) terminals

These are the input terminals for MC cartridge (RCA).

(10) MC1 RCA/XLR switch

You can select either RCA (Unbalance) or XLR (Balance) matching the terminal of phono cable connected to MC1.

Caution

If the MC1 RCA/XLR switch is switched to XLR when connecting a cable to the MC1 RCA terminal, a hum noise and so on can be heard in some audio system.
The connector might invite errors if it is plugged in both RCA and XLR of MC1 at the same time.

(11) MC1 INPUT (XLR) terminal

When the phono cable to be connected is the balance type (XLR), connect them to this input terminal.

(12) MM INPUT terminal

This is the input terminals for MM cartridge (RCA).

(13) OUTPUT (RCA) terminal

This is the output terminal of unbalance equalizer output (RCA); so, you can connect a cord to an RCA input terminal specified to the line level (150 to 250 mV) such as an AUX terminal of pre-amplifier.

(14) OUTPUT (XLR) terminal

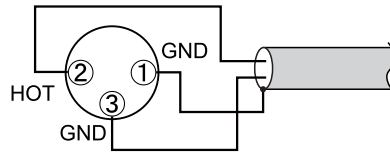
This is the output terminal of unbalance equalizer output (XLR); so, you can connect a cord to an XLR input terminal specified to the line level (150 to 250 mV) such as an AUX terminal of pre-amplifier.

Caution

Do not connect between this terminal and a phono input terminal of pre-amplifier having phono amplifier circuit, or the audio tone is distorted by the large input level.

Note

The XLR terminal is adopted as an unbalance terminal of OUTPUT for this product. Pin assignment is as follows: pin-1: GND, pin-2: HOT and pin-3: GND.



Pin assignment of some power amplifier may be assigned as follows: pin-1: GND, pin-2: COLD and pin-3: HOT. In this condition, the output signal is reproduced in the opposite phase of the input signal.

To play it in the proper phase, exchange wirings of pin-2 and pin-3 at one end of balance cable before connecting the XLR terminal.

(15) GND terminal

Connect an earth cable from analogue disc player to one GND terminal of two GNDs of L and R.

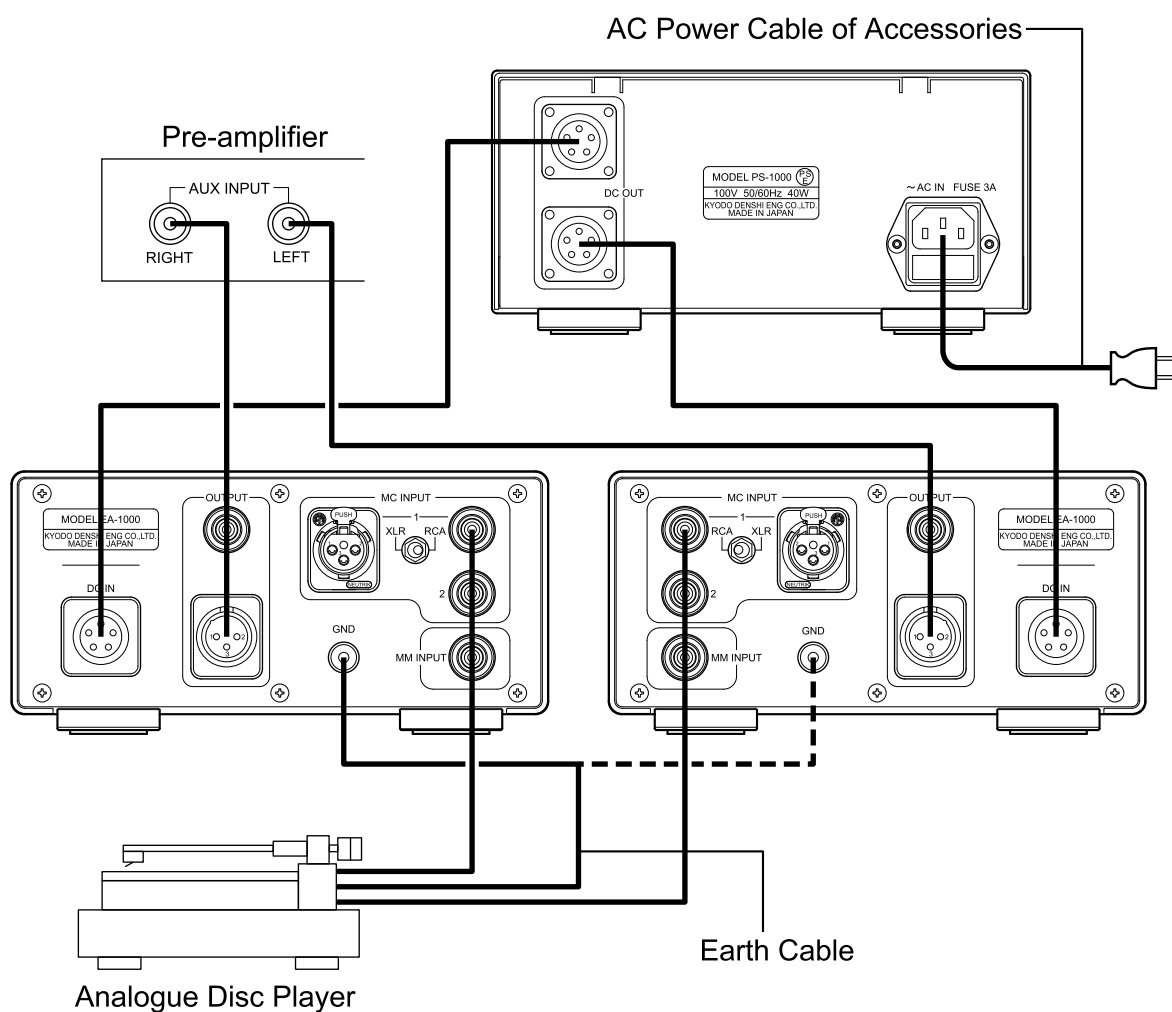
Note

Not to connect between L and R GNDs is recommended; however, define whether you connect between them so as to match your audio system, or not.

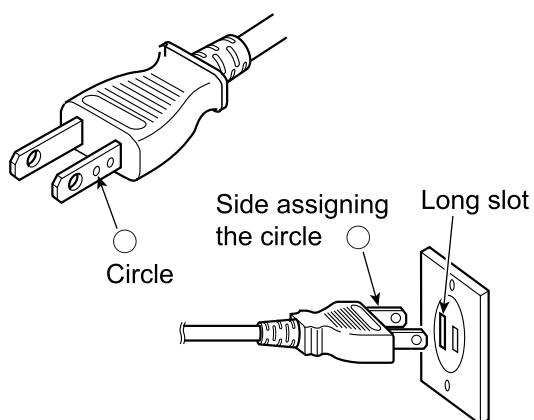
(16) DC IN connector

Connect the DC power junction cable of accessories between this DIN Connector and the Power equipment.

Connections



Plugging the plug of AC power cable in an outlet



A circle is assigned on the one side of the plug of AC power cable so that better quality sound is reproduced by matching the power supply polarity with other equipment.

This polarity may be different because of house wiring for outlet or because of power supply condition; however, generally the side assigning the circle should be inserted to the long slot of the outlet.

Trouble Shooting Guide

In case the equipment does not operate properly, check out the followings.

If it does not operate properly even after checking the advised points, endure to disconnect the AC plug from the outlet and then contact the dealer.

Trouble	Causes	Measures
The power is not supplied.	● The plug of AC power cable is not plugged in completely.	● Insert the plug of AC cable into an outlet firmly. ● Firmly insert the outlet of AC power cable into the AC inlet of Power equipment.
The sound is not heard.	(1) The audio wires are not plugged in completely.	● Insert the audio wires completely.
	(2) An MM cartridge is used, but the INPUT switch is set to MC1 or MC2.	● Set the INPUT switch to MM.
Sound is distorted.	● The OUTPUT terminals of this equipment are connected to the input terminals for a phono amplifier on the panel of the pre-amplifier.	● Connect them to line level input terminals (such as AUX) of pre-amplifier.
When operating the switches, the click noise is heard.	● Some click tone is generated because of switch principle.	● Before operating the switches, turn the power of this equipment to OFF or decrease volume of the connected amplifier.
Hum noise is heard.	● The audio wires are not plugged in completely. ● The earth cable from the analogue disc player is not connected. ● A power supply transformer or motor in other equipment is installed near this equipment.	● Insert the audio wires completely. ● Connect the earth cable completely. ● Place this equipment apart from the power supply transformer or motor of other equipment.
Sound is not heard immediately after turning the power on.	● The vacuum tubes are worked in the equipment. Sound is not outputted until the circuits become stable operation.	● After turning the power supply to ON, please wait one minute.

User Support

As for the unclear matters with regard to the after service, please contact the dealer.

Specifications

Product	Three Chassis MM/MC Phono Amplifier with CR Equalizer		
Cartridge type	MM	MC: Low	MC: High
Input sensitivity	2.3 mV	0.09 mV	0.22 mV
Input impedance	47k ohms or less	10 ohms or less	10 ohms or more
Gain	39 dB	67 dB	59 dB
Equivalent input noise	-115 dB	-143 dB	-135 dB
Maximum input voltage	250 mV	11 mV	25 mV
Rated output voltage	200 mV (1 kHz)		
Deviation from RIAA curve	±0.3 dB (20Hz to 20kHz)		
Output impedance	750 ohms		
Channel separation	100 dB or more (for MM/MC)		
Power consumption	40W (230VAC, 50 to 60 Hz)		
Dimensions (mm)	Phono Equalizer Units: W210 x H103 x D347		
	Power Supply Unit: W210 x H103 x D333		
Weight	Phono Equalizer Units: 4.5 kg (x2)		
	Power Supply Unit: 7 kg		

Accessories: AC power cable (x1), DC power junction cable (x2)

- The appearance and specifications of this equipment are subject to change without notice in order to improve it.

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Phasemation is the original audio brand of Kyodo Denshi Engineering Co., Ltd.