

Owner's Manual

CA-1000

CONTROL 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 CA-1000 safely and properly in order to avoid the loss of customer's assets and to protect our customers from harm.

 WARNINGS	<ul style="list-style-type: none"> Do not use the equipment being broken. 	 	<ul style="list-style-type: none"> In case of using the equipment in an abnormal state, such as seeing smoke, having strange smell or hearing unusual sounds or noises, 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 the dealer for the repair.
	<ul style="list-style-type: none"> Never remodel the equipment. 		<ul style="list-style-type: none"> Do not disassemble the equipment or remodel it. This can result in a risk of fire.
	<ul style="list-style-type: none"> Never install the equipment near water. 	 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Never put an object filled with water on the equipment. 		<ul style="list-style-type: none"> Do not put a vase, flower pot, glass or any object filled with skin lotion, chemical substance or water, or small metal objects 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.
	<ul style="list-style-type: none"> Never put an object inside the equipment. 		<ul style="list-style-type: none"> 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 or electric shock.

 CAUTIONS	<ul style="list-style-type: none"> Cautions of Installation 		<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Places which are not suitable for installation 		<ul style="list-style-type: none"> Do not install the equipment in the humid or dusty environment. This can result in a risk of fire or electric shock.
	<ul style="list-style-type: none"> Connection 		<ul style="list-style-type: none"> When connecting with other audio equipments or a television set, read the manual of the 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 forth.
- Do not use this equipment at a poorly-ventilated, humid or dusty place.
- Do not install this equipment at an unstable place such as a 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 a high humid environment.
- Avoid using this equipment on equipments generating heat such as an amplifier.
- Keep this equipment away from a power supply transformer or a motor of an other equipment.

Note

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

At the amplifier section, 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 it 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 230V power supply must be supplied.
- The equipment operates normally in both areas of the 50Hz and 60Hz power supply frequencies.

Handling the AC power cable

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

Repair

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

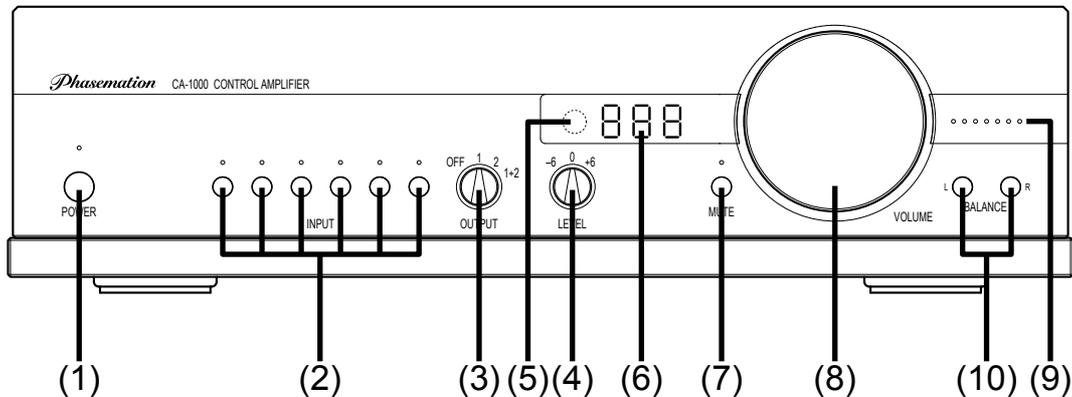
Care of Equipment

- ⊙ 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 or 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

Control & Power Section

Front Panel



(1) POWER switch/indicator

This switch turns the power ON or OFF. After this switch is pressed to turn it to ON, a blue indicator lights up and then, '30' is displayed on (6) DISPLAY and it starts to count down. While it is counting down, the product enters the 'STANDBY' mode and the other functions and indicators are temporarily stopped. After the countdown finishes, the control amplifier functions become available at the condition with each part being maintained before it was turned off.

(2) INPUT SELECTOR switches/indicators

These respective switches select the desired input source to be played. The blue indicator corresponding to the selected source lights up. The condition of the selected input source is stored so even after the power is turned to OFF and ON, the same source is selected.

(3) OUTPUT selection switch

This switch selects the desired output terminal as follows:

- OFF: Not outputted
- 1: Unbalanced output through the RCA pin connector
- 2: Balanced output through the XLR connector
- 1+2: Both of them at the same time

(4) LEVEL selection switch

This switch selects the desired amplifier gain as follows:

- 6: Decreasing 6dB from the standard level
- 0: LEVEL 0dB (Standard level: 12dB)
- +6: Increasing 6dB from the standard level

(5) Remote controller reception portion

This portion receives the light from the remote controller.

When installing the product, do not place an object disturbing the light between this portion and the remote controller.

(6) Display portion

This displays the attenuation (dB) of the attenuator; however, '– 99' is close to nothing.

(7) MUTE switch/indicator

This switch mutes the audio output and this indicator lights up. Then by pressing this switch again, the muting mode is cancelled and the audio output is returned to the previous level. The same operation can be controlled by using the MUTE switch of the remote controller.

The ATT switch on the remote controller decreases the audio volume by 20dB from the displayed level and this indicator flashes. Then by pressing the ATT switch again, the attenuation mode is cancelled.

* The muting mode or the attenuation mode is cancelled by pressing the VOLUME UP, VOLUME DOWN or BALANCE switch.

(8) VOLUME knob

This knob controls the audio volume and the volume is increased by turning it right (clockwise) and decreased by turning it left (counterclockwise).

(9) BALANCE indicators

These indicate the setup due to the (10) BALANCE switches.
The center is blue and the other six are orange.

(10) BALANCE switches

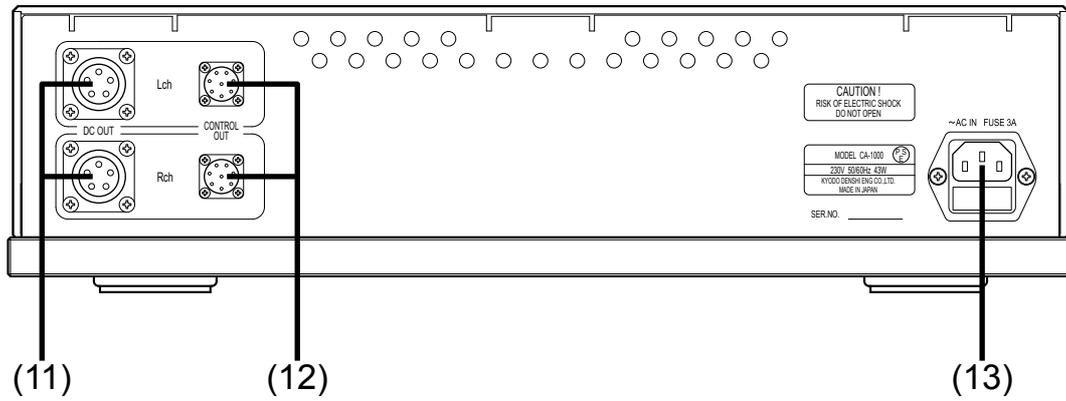
These switches adjust the volume difference between L-ch and R-ch. A maximum of a three-step difference between L-ch and R-ch master-volume step can be set and the setup is indicated by (9) BALANCE indicators.

* The difference is made by decreasing one of the master-volume steps of L-ch and R-ch.

Example: When the center indicator (blue) lights up, when R-ch switch is pressed once, the L-ch volume is decreased by one step.

* When the outside end indicator lights up, when that switch is pressed, the indicator is changed from lighting-up to flashing and the other channel volume level is changed to 0-step. (This operation is utilized for checking respective channels.)

Rear Panel



(11) DC OUT terminals

Connect these to the amplifier section.

(12) CONTROL OUT terminals

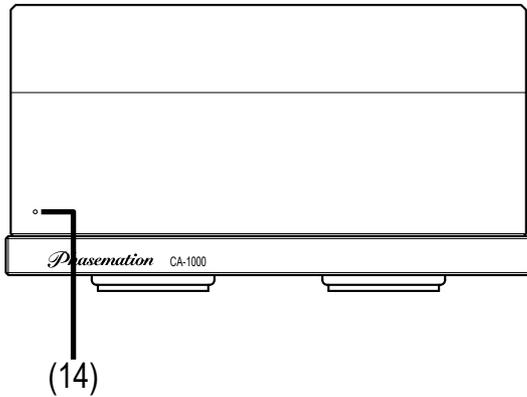
Connect these to the amplifier section.

(13) Power inlet

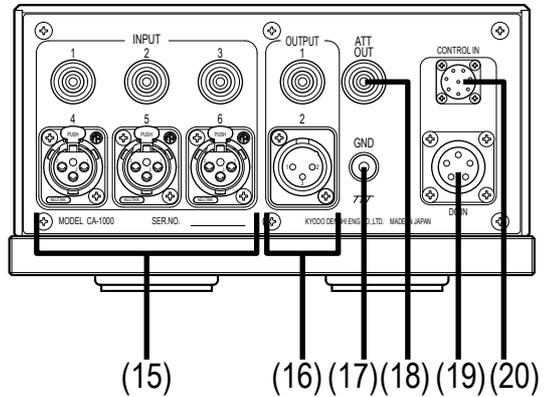
Connect this to your AC outlet through the AC power cable of the accessories.

Amplifier Section

Front panel



Rear panel



Lch: C1*****L White RCA connector
 Rch: C1*****R Red RCA connector
 Serial No.

(14) POWER indicator

This indicator lights up blue when the power is ON.

(15) INPUT terminals

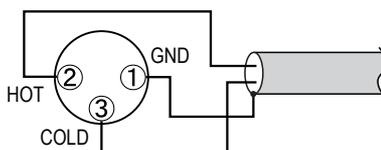
Unbalanced input terminal of the RCA connector (INPUT 1, 2 and 3)
 Balanced input terminal of the XLR connector (INPUT 4, 5 and 6)

Caution

The balanced input circuit contains a transformer for this product. When the balanced system to which a unbalanced system is converted by some conversion adaptor is inputted to the balanced input of this product, the original performance cannot be realized.
 For the balanced input of this product, connect a balanced output.

Note

The XLR terminal is adopted as a balanced terminal of INPUT for this product. Pin assignment is as follows: pin-1: GND, pin-2: HOT and pin-3: COLD.



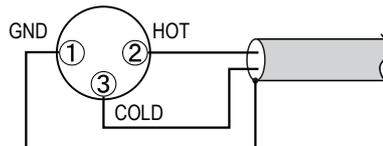
(16) OUTPUT terminals

Unbalanced output terminal of the RCA connector (OUTPUT 1)
Balanced input terminal of the XLR connector (OUTPUT 2)

Note

The XLR terminal is adopted as a balanced terminal of OUTPUT for this product.

Pin assignment is as follows: pin-1: GND, pin-2: HOT and pin-3: COLD.



(17) GND terminal

This is the reference earth point for the audio system.

Caution

For any equipment connected to this product through the RCA or XLR connector, do not connect this GND terminal to it as earth; otherwise, an earth loop formed between the equipment and this product deteriorates the sound quality.

If necessary, utilize this GND terminal for a ground circuit separated against an audio signal circuit, such as for a motor earth of an analog player, a chassis of a MC step-up transformer, or earth.

(18) ATT OUT terminal

This is the unbalanced output terminal to which the signal is directly outputted from the built-in passive attenuator without passing through the amplifier section.

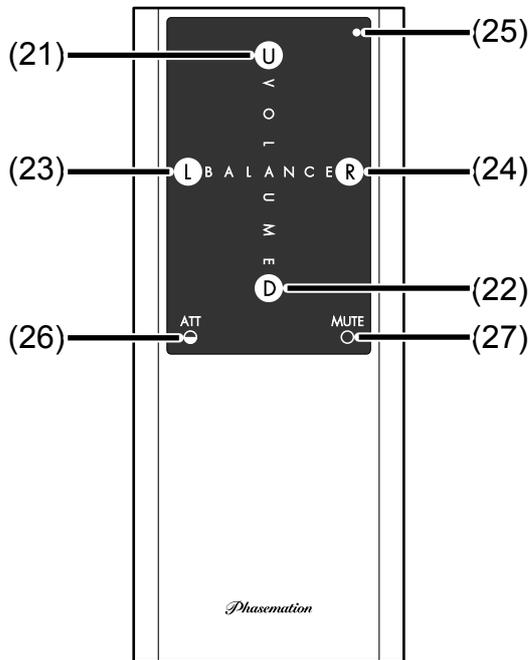
(19) DC IN terminal

Connect this to the control & power section.

(20) CONTROL IN terminal

Connect this to the control & power section.

Remote Controller



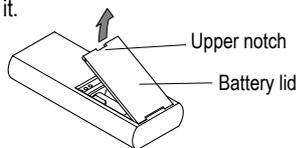
- (21) **VOLUME switch (UP)**
Increases the audio volume.
- (22) **VOLUME switch (DOWN)**
Decreases the audio volume.
- (23) **BALANCE switch (LEFT)**
Shifts the balance to the left.
- (24) **BALANCE (RIGHT)**
Shifts the balance to the right.
- (25) **LED**
Flashes when some switch is pressed.
- (26) **ATT switch**
Decreases the volume by 20dB.
- (27) **MUTE switch**
Mutes the audio output. (No sound)

Usage of Remote Controller

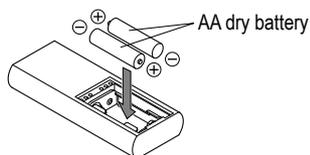
■ Setting dry batteries in the remote controller

Before using the remote controller of the accessories, new dry batteries should be set. The batteries of accessories are for confirming the operation of the remote controller.

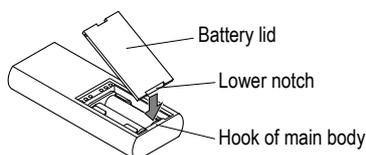
1. Lift the upper notch of the battery lid towards the arrow direction and remove it.



2. Set the two new AA dry batteries as shown below with being careful about the polarities (direction of +: plus and -: minus).

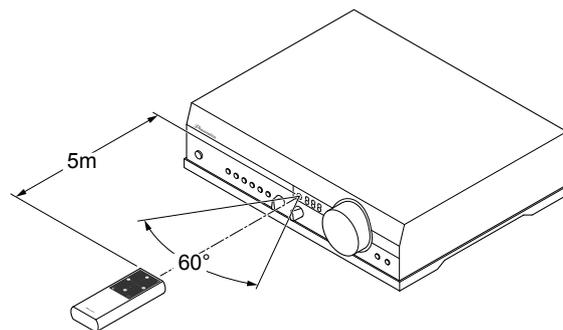


3. Attach the lower notch of the battery lid to the hook of the main body and fit the battery lid to the main body.



■ Operational distance of the remote controller

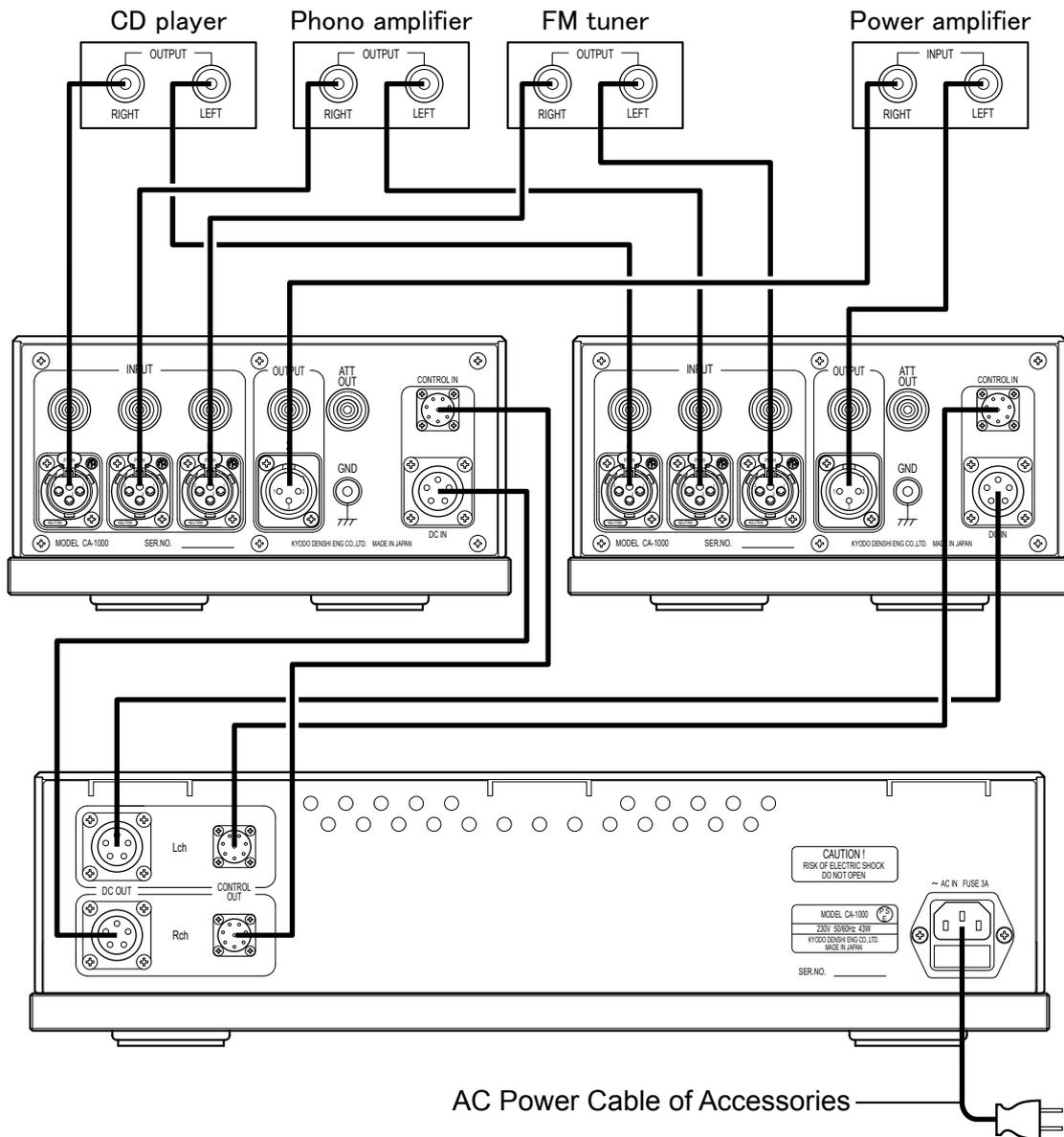
The operational angle of the remote controller is 60 degrees in upper, lower, right, and left, and the operational distance is within 5m.



■ Cautions for using the remote controller

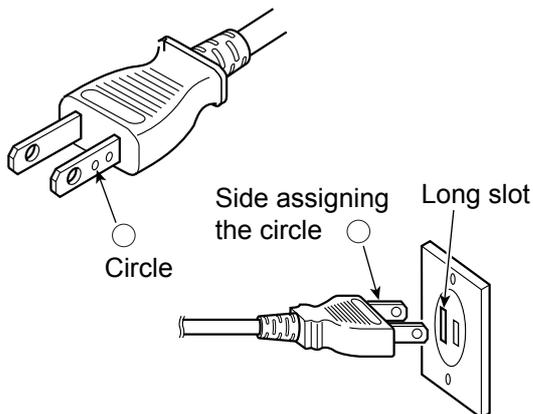
- Never expose the remote controller reception portion to intense light such as a direct sunlight or an inverter type fluorescent lamp. The operation of the remote controller may become invalid.
- Note that the IR ray causes equipment controlled by the IR ray to malfunction when operating the remote controller.
- In case that an object is placed between the remote controller and remote controller reception portion, the operation becomes invalid.
- Do not place an object on the remote controller, or the batteries are consumed because some switch continues to be pressed.

Connections



AC Power Cable of Accessories

Plugging the plug of AC power cable in an outlet



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

This polarity may be different because of the house wiring for the outlet or because of the 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.	<ul style="list-style-type: none"> ● The plug of the AC power cable is not plugged in completely. 	<ul style="list-style-type: none"> ● Insert the plug of the AC cable into an outlet firmly. ● Firmly insert the outlet of the AC power cable into the AC inlet of the power equipment.
The sound is not heard.	<ul style="list-style-type: none"> ● The audio wires are not plugged in completely. ● The output selector is set to OFF 	<ul style="list-style-type: none"> ● Insert the audio wires completely. ● Set it to the desired output terminal.
Hum noise is heard.	<ul style="list-style-type: none"> ● 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 an other equipment is installed near this equipment. 	<ul style="list-style-type: none"> ● Insert the audio wires completely. ● Connect the earth cable completely. ● Place this equipment apart from the power supply transformer or a motor of an other equipment.
Sound is not heard immediately after turning the power on.	<ul style="list-style-type: none"> ● The vacuum tubes are worked in the equipment. Sound is not outputted until the circuits come to stable operation. 	<ul style="list-style-type: none"> ● After starting to count down from 30 on the display panel, wait until it finishes. (About 30 seconds)

User Support

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

Specifications

Product	Tube type Control Amplifier which is separated in to three units and has the impedance-matching-volume adjustment circuit
Input sensitivity	500mV/1000mV (RCA/XLR)
Input impedance	47k-ohm
Gain	Standard (12dB), Standard ± 6 dB
Equivalent input noise	-100dBV (10 μ V): A-NET
Channel separation	100dB or more (20Hz to 20kHz)
Rated output voltage	2.0V (1kHz)
Frequency characteristics	20Hz to 20kHz (± 0.5 dB)
Output impedance	100 ohm or less (for balanced and unbalanced type)
Power consumption	43W (230VAC, 50 to 60 Hz)
Input/Output terminals	Made by WBT and NEUTRIK
Dimensions (mm)	Control & Power section: 434(W) \times 118(H) \times 374(D)
	Amplifier section: 214(W) \times 118(H) \times 355(D)
Weight	Control & Power section: 14kg
	Amplifier section: 7.5kg x2

Accessories: DC power relay cable x2, Control communication cable x2
GND cable x1, AC power cable x1, Remote controller x1, Battery 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.