

Phasemation

T-320

MC STEPUP TRANSFORMER

Owner's Manual

Thank you for purchasing Phasemation product. Read your Owner's Manual thoroughly for proper operation before starting to use your equipment.

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 T-320 safely and properly in order to avoid the loss of customer's assets and to protect our customers from harm.

Indication Mark Ex. / Inside the diagrams or nearby shows in detail what is prohibited.		
	Electric Shock Caution △ This sign states that there are contents that urges caution (including danger/warning).	
	Disassembly Prohibited ⊘ This sign states prohibited action.	
	Pull out the power plug from the outlet ● This sign states that there are contents that forces or instructs action.	

! WARNINGS		If this indication is ignored and handled incorrectly, these contents show that there is a possibility that can cause death or severe injury of a person.
	Do not use the equipment being broken.	In case this equipment falls or is damaged, or the abnormal sound is brought, stop it and consult your dealer. If continuing using without measure, it can be caused to malfunction. Never repair it because repairs done by the user is very dangerous.
	Never remodel the equipment.	Disassembling or remodeling this unit not only causes it to be damaged but can affect other devices. Therefore never disassemble or remodel.
	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, cup, chemical, water, or small metal object on the equipment. In case the liquids are spilled or 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, contact the dealer. To keep using the equipment can result in a risk of fire or electric shock.

! CAUTION		If this indication is ignored and handled incorrectly, these contents show that there is a possibility that people can get injured or objects can get damaged.
	Do not place on top of unstable places.	Do not place on top of unstable places such as wobbling stands or tilted areas. It can fall or drop on the ground and cause injury.
	Do not set anything heavy on top.	Do not set anything heavy or any big object that sticks out of the edge of this unit. It can lose its balance and fall or drop on the ground, and cause injury.
	When moving it	When moving it, turn the power switch off of connected devices and disconnect cords and then move it. If not, the cords could get damaged and can cause fire or electric shock.
	Places which are not suitable for installation	Places where it comes into contact with soot or steam such as kitchen counters and humidifiers. Places where there is too much humidity or dust. Hot areas such as near heaters or places where it comes into contact with direct sunlight. It may cause fire or electric shock.
	Connection	When connecting with other audio equipments, read the manual of the equipments, turn the power switch off, and connect according to the instructions.

Usage Cautions

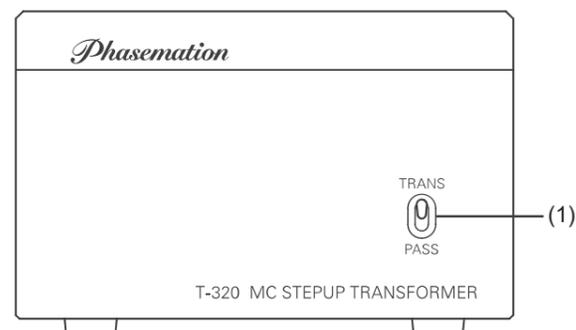
Installation place	In order to use the equipment for a long time, follow the instructions shown in below:
● Do not install this equipment near a heat source such as direct sun light, a stove and so on.	
● Do not use this equipment at a poorly-ventilated, humid or dusty place.	
● Do not install this equipment at an unstable place such as a slope or a vibrating place.	
● Do not install this equipment near the window where the equipment can be exposed to rain.	
● Do not place this equipment somewhere that can come in contact with soot or steam such as a kitchen counter or humidifier.	
● Avoid using this equipment on an equipment generating heat such as an amplifier.	
● Do not place this equipment near a power supply transformer or a motor of another equipment.	
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.

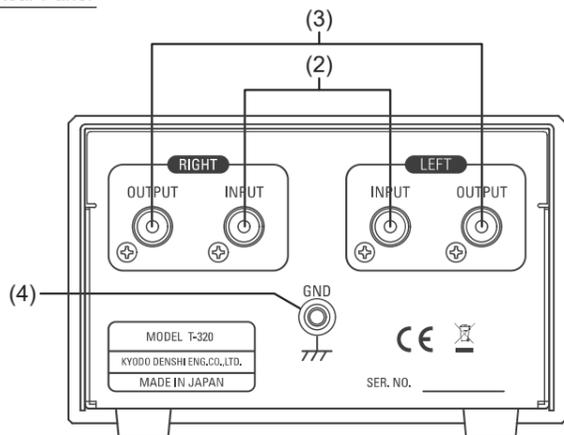
Names and Functions

Front Panel



- (1) TRANS / PASS Switch
- | | |
|-------|---|
| TRANS | Select this when using an MC cartridge. |
| PASS | Select this when using an MM cartridge. |

Rear Panel



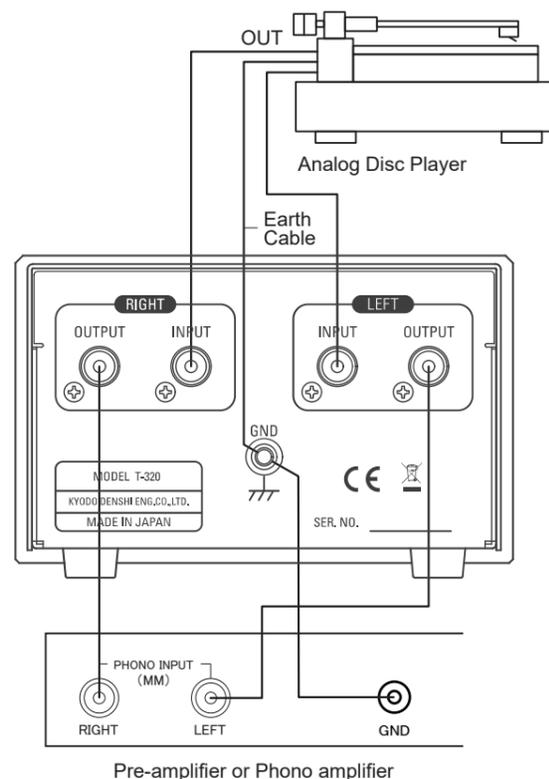
- (2) Phono Input Terminals
- Connect the audio cables, L and R, from your analog disc player.

- (3) Phono Output Terminals
- Connect them with the MM input terminals of a pre-amplifier or phono amplifier.
- * Never connect them to the MC terminals or the excessive input will distort the sound.
- (4) GND Terminal
- Connect the earth cables from at the GND terminals of analog disc player and the phono amplifier or others.
- * The earth cable shall essentially be connected between the transformer and the pre-amplifier or phono amplifier. However, you should judge whether connecting to the earth is good, or not, because it is not good uncommonly.

Caution

Do not apply testers to the input/output terminals. The transformer's performance will deteriorate.

Connections



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, then contact the dealer.

Trouble	Causes	Measures
The sound is not heard.	● The audio wires are not plugged in completely.	● Insert the audio wires completely.
Sounds warp and the volume decreases.	● The unit's output is connected to the MC input terminal of a pre-amp or phono amp. ● The load resistance of the phono amplifier is not 47k ohms.	● Connect to the pre-amp or phono amp MM input terminal. ● Receive the output from the transformer at high impedance. ● If there is an exchanging switch of the load resistance, set it to 47k ohms.
A hum noise is heard.	● The audio wires are not plugged in completely. ● The earth cable with the analog disc player is disconnected. ● A power supply transformer or motor in another equipment is installed near this equipment. ● The earth cable with the phono amplifier is disconnected. ● The RCA cable connected to the output terminal is a shield floating type	● Insert the audio wires completely. ● Surely connect the earth cable. ● Place this equipment apart from the power supply transformer or motor of other equipments. ● Surely connect the earth cable. Test it by also connecting the grounds of the phono amplifier and pre-amplifier with the earth cable although usually it is not necessary. ● Cables with the shield being floated may induce noises. For ones with an earth cable, it may improve if the earth cable is connected. For ones without an earth cable, connect using a different cable.

Specifications

Product	MC Stepup Transformer Supporting Phono Balanced Transmission
Applicable Cartridge's Output Impedance	1.5 to 40 ohms
Load Impedance	47k-ohms
Step-up ratio (Voltage gain)	26dB
Frequency Response	10Hz to 50kHz (±2dB)
Dimensions	W:136mm x H:92mm x134mm
Weight	1.3kg
INPUT/OUPUT terminals	Gold-plated terminal

● Dimensions and specifications are subject to change without notice in order to improve it.

Phasemation

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