



Phonostage Preamplifier

# Operating Manual

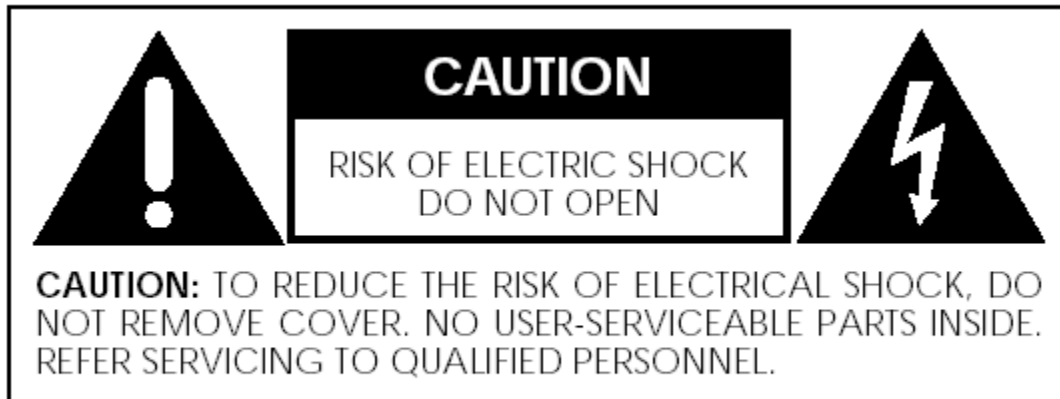
North Star Design®

Phonostage

MM-MC Phono Preamplifier



**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Marking by the “CE” symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community.

# Important Safety Instructions

Please read all instructions and precautions carefully and completely before operating your North Star Design® Phono preamplifier.

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. This product must be terminated with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used.
3. AC extension cords are **not** recommended for use with this product.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate this product with any covers removed.
6. **NEVER** wet the inside of this product with any liquid.
7. **NEVER** pour or spill liquids directly onto this unit.
8. **NEVER** block air flow through heatsinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified.
11. **NEVER** attempt to repair this product. If a problem occurs, contact your North Star Design® retailer.
12. **NEVER** expose this product to extremely high or low temperatures.
13. **NEVER** operate this product in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of the reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

## Introduction

Welcome to the North Star Design “family” and congratulations on your purchase of what is unquestionably one of the world’s finest audio MM-MC Phono preamplifier. With its combination of features, precision electronic circuitry and accurately machined chassis components throughout, your Phonostage Preamplifier will offer you many years of musically satisfying enjoyment. Please take a few moments to read the remainder of this Operating Manual. A thorough understanding of the operational features will allow you to gain the maximum performance and ease of use for which this Preamplifier was designed.

Enjoy the music!

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## Initial Inspection

Inspect the shipping container for damage. If the shipping container, packing material, Preamplifier or accessories are damaged or missing, notify your dealer and the shipper (if a claim is to be made). Note: Many shippers require notification and an inspection within twenty-four (24) hours of delivery to ascertain the nature of damages incurred.

Your Phonostage Preamplifier has undergone extensive performance evaluations, listening tests, quality control inspections and a minimum forty-eight (48) hour burn-in period prior to shipment and should be in a perfect operational condition upon receipt. If the Preamplifier does not operate correctly, please notify your dealer immediately.

We strongly suggest that you save all packing materials. If the Preamplifier is returned to your dealer the original packing materials must be used for shipment. Neither North Star Design nor the shipper can be held responsible for damages incurred during transit if the original factory packing is not used. All factory returns require that a Return Authorization number be issued by North Star Design prior to shipment.

## Contents

Ensure that all of the auxiliary components listed below are enclosed into the box.

- 1 One (1) Operating Manual
- 2 One (1) AC power cable
- 3 One (1) four poles DC power cable
- 4 One (1) warranty card (in some countries warranties are provided by the respective importer)



## Front Panel

### 1 INDICATOR LED

The **indicator led** shows the operational status of your Phonostage Preamplifier:

**Blue brightness** indicates that the Preamplifier is **on** and ready to be used.

**Completely off** indicates that the **rear panel AC mains switch** has been turned off.

If the Preamplifier will not turn on, you may want to check the **rear panel AC mains switch**, your AC connections, or have your dealer inspect the rear panel fuses.

## Rear Panel

### Caution!

**Switch Off the Preamplifier when you need to connect or disconnect any cables.**

### 2 GROUND CONNECTION

Connect the ground cable from the turntable.

### 3, 4 UNBALANCED INPUT

The RCA connectors accept one unbalanced input from a turntable source with single-ended (RCA) outputs.

### 5, 6 UNBALANCED OUT

The Phonostage Preamplifier is equipped with one pair of original WBT single ended connectors. To take full advantage of the Phonostage sonic quality, we recommend using high-quality interconnection cables; ask your North Star Design dealer.

### 7 POWER DC INPUT

### 8 POWER DC OUT

Connect the POWER DC OUT and IN with the cable supplied in the box.

### 9 AC MAINS INLET AND AC MAINS SWITCH

Standard IEC power cords are provided with the Phonostage Preamplifier. High quality power cords will improve the sonic performances; ask your North Star Design dealer.

**The North Star Design Phonostage Preamplifier has been safety-tested and is designed for operation with a three-conductor power cord. Do not defeat the “third pin” or earth ground of the AC power cord.**

An **AC mains switch** is located adjacent to the power cord on the rear panel of the amplifier. This switch may be used to disconnect the power supply from the AC mains without having to actually unplug the preamplifier from the wall outlet. If you plan to be away for an extended period, or have any other reason to turn the preamplifier completely off, you may use the **AC mains switch**.

Two slow-blow 315mA (220-240V), 630mA (100-120V) fuses are located inside a small drawer in the AC main inlet. If you suspect that your AC fuses have blown, disconnect the Phonostage from the AC mains and contact your North Star Design dealer for assistance.

**Danger! Potentially dangerous voltages and current capabilities exist within the Phonostage preamplifier, when connected to the AC mains. Do not attempt to open any portion of the Phonostage cabinet.**

**There are no user-serviceable parts inside the Phonostage preamplifier. All service of this product must be referred to a qualified North Star Design dealer or distributor.**

## **INPUT LOAD AND GAIN SETUP**

The Phonostage Preamplifier is a complete Phono Preamplifier with RIAA equalization which work with MM and MC cartridges. You can connect the Phonostage Preamplifier at a line level input of an Integrated amplifier or, if you have separates components, you need a volume control (Line Preamplifier) before the Power Amplifier.

To correct interface your cartridge at the Phonostage input you need to setup the input load and and overall gain; the dip switch for the gain and load are located at the bottom of the Phonostage.

### **WARNING! POWER OFF THE UNIT WHEN YOU CHANGE SETUP**

#### **GAIN SETUP**

Lower gain (40-45dB) are required for moving magnet cartridges or high gain moving coil (2.0mV or more).

Medium gain (48-50dB) is ideal for moving coil with medium output (0,9-1,5mV).

Higher gain (56-60dB) is necessary for low output moving coil (0,2-0,6mV).

#### **INPUT LOAD SETUP**

Two 8 positions dip switch are present to setup the input load, one for channel.

The instructions for the setup are printed near the dip switch. Refer at the cartridge instructions to correctly setup the input load of the Phonostage. Use a pencil or a non-metallic screwdriver to change the dip switch position.

The capacitive load is use primarily with MM cartridges. You can select 220pF-320pF.

The resistive load is fundamental with low output moving coil cartridges. The MM and high output MC need a standard 47kOhm. The low output MC need a load below 1kOhm. You can select a value for the resistive load, typically 10 x internal cartridge resistance. Refer to the cartridge manufacture for optimal interface.



INPUT LOADING SETUP

	sw1	sw2	sw3	sw4	sw5	sw6	sw7	sw8	RIN
na	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	100.000
na	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	47.000
na	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	2.000
na	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	990
na	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	688
na	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	468
na	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	381
na	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	318
na	OFF	OFF	OFF	ON	ON	ON	ON	OFF	275
na	OFF	OFF	ON	OFF	OFF	ON	ON	ON	214
na	OFF	OFF	ON	OFF	ON	ON	ON	ON	176
na	OFF	OFF	ON	ON	OFF	OFF	ON	ON	158
na	OFF	OFF	ON	ON	ON	ON	OFF	ON	137
na	OFF	ON	OFF	OFF	OFF	OFF	ON	ON	120
na	OFF	ON	OFF	OFF	ON	ON	OFF	ON	107
na	OFF	ON	OFF	OFF	ON	ON	ON	ON	102
na	OFF	ON	OFF	ON	OFF	ON	ON	ON	91
na	OFF	ON	ON	OFF	OFF	OFF	ON	ON	80
na	OFF	ON	ON	ON	ON	ON	ON	ON	62
na	ON	OFF	OFF	ON	OFF	OFF	ON	ON	50
na	ON	OFF	ON	ON	ON	OFF	ON	ON	40
na	ON	ON	ON	ON	ON	OFF	ON	ON	30

	sw1	sw2	sw3	sw4	sw5	sw6	sw7	sw8	Cin
OFF	na	na	na	na	na	na	na	na	220pF
ON	na	na	na	na	na	na	na	na	320pF

GAIN SETUP

sw4	sw3	sw2	sw1	GAIN dB
OFF	OFF	OFF	OFF	60,00
OFF	OFF	OFF	ON	58,20
OFF	OFF	ON	ON	50,00
OFF	ON	OFF	ON	48,20
ON	OFF	OFF	OFF	45,20
ON	OFF	ON	OFF	43,00
ON	ON	ON	ON	40,00



## TECHNICAL SPECIFICATIONS

BANDWIDTH	5 Hz to 90 kHz, -3 dB
MAXIMUM OUTPUT VOLTAGE	8.5Vrms (47KOhm load)
OVERALL GAIN	40dB-60dB@1kHz selectable with dip-switch
INPUT IMPEDANCE	29Ohm-100kOhm selectable with dip-switch
POWER CONSUMPTION	15 watts
INPUT UNBALANCED	1 pair per channel (RCA)
OUTPUT UNBALANCED	1 pair per channel (RCA)
DIMENSIONS	17 in (W) x 15.5 in (D) x 3.35 in (H) 43.5 cm (W) x 35 cm (D) x 8.5 cm (H)
WEIGHT	20 lbs. (9 Kg)

## NOTES



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