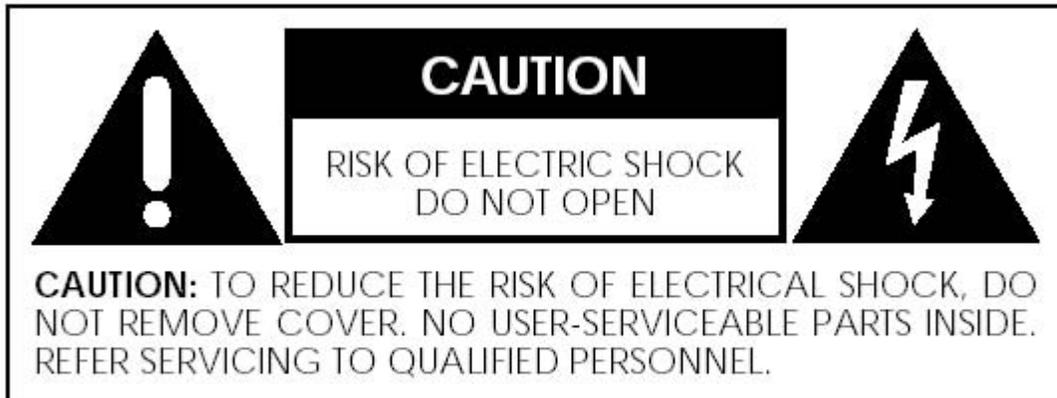**Supremo**

Operating Manual

North Star Design®

Supremo

384kHz/32bit-DSD USB DAC

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

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

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® Supremo.

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** bypass any fuse.

9. **NEVER** replace any fuse with a value or type other than those specified.

10. **NEVER** attempt to repair this product. If a problem occurs, contact your North Star Design® retailer.

11. **NEVER** expose this product to extremely high or low temperatures.

12. **NEVER** operate this product in an explosive atmosphere.

13. **ALWAYS** keep electrical equipment out of the reach of children.

14. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

RoHS Compliant Information

This statement clarifies North Star Design srl product compliance with the European Union directive 2002/95/EC,or, *RoHS* (Restrictions of Hazardous Substances). As of July 01, 2006, All North Star Design products placed on the European Unionmarket are *compliant* (containing quantity limit weight less than or equal to 0.1% (1000 ppm)of any homogeneous Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr VI), and flameretardant Polybrominated Biphenyls (PBB) or Polybrominated Diphenyl Ethers (PBDE)).

Introduction

Welcome to the North Star Design "family" and congratulations on your purchase of what is unquestionably one of the world's finest audio Digital-to-Analogue converter. With its combination of features, precision electronic circuitry and accurately machined chassis components throughout, your *Supremo* 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 DAC was designed.

Enjoy the music!

Initial Inspection

Inspect the shipping container for damage. If the shipping container, packing material, DAC 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.
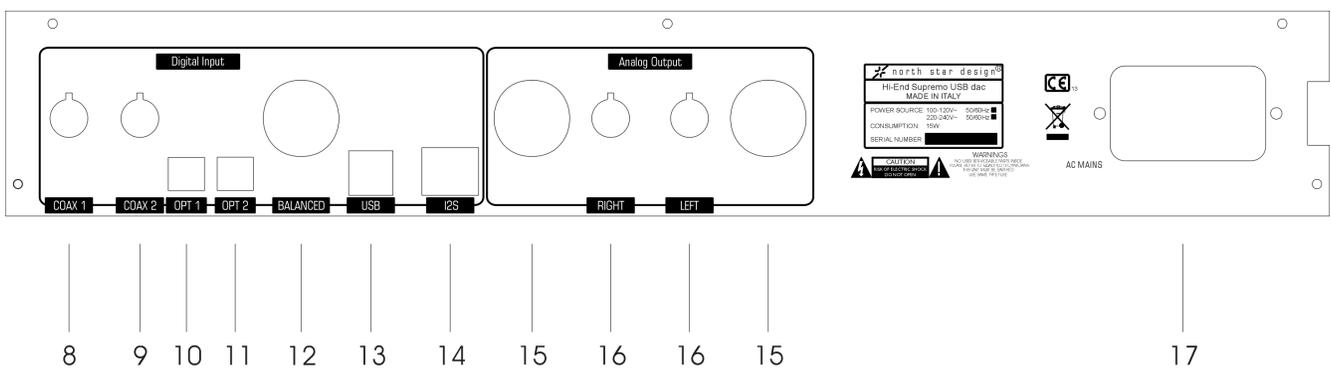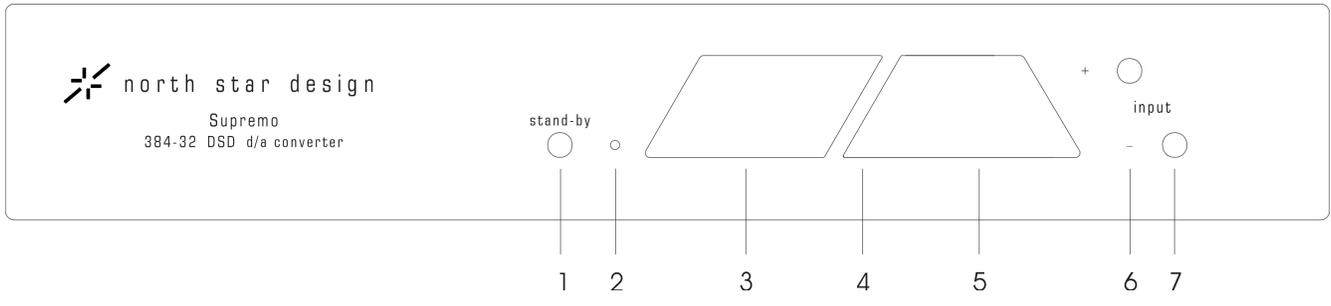Your Supremo has undergone extensive performance evaluations, listening tests, quality control inspections and a minimum twenty-four (24) hour burn-in period prior to shipment and should be in a perfect operational condition upon receipt. If the DAC does not operate correctly, please notify your dealer immediately.
We strongly suggest that you save all packing materials. If the DAC 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) Configuration Audio Players Manual
3 One (1) AC power cable
4 One (1) USB2.0 cable
5 One (1) CD-ROM with drivers
6 One (1) warranty card (in some countries warranties are provided by the respective importer)

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Supremo
384-32 DSD d/a converter

stand-by

+

input

1   2   3   4   5   6   7

Digital Input

Analog Output

north star design®

Hi-End Supremo USB dac
MADE IN ITALY

POWER SOURCE: 100-120V~   50/60Hz
220-240V~   50/60Hz
CONSUMPTION: 15W
SERIAL NUMBER

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNINGS
NO USER SERVICEABLE PARTS INSIDE
PLEASE REFER TO A QUALIFIED TECHNICIAN.
THIS UNIT MUST BE EARTHED
USE SAME TYPE FUSE

AC MAINS

COAX 1   COAX 2   OPT 1   OPT 2   BALANCED   USB   I2S   RIGHT   LEFT

8   9   10   11   12   13   14   15   16   16   15   17

Installation

Locate the Supremo as close as possible to its final installation point. Allow access to the rear panel for making connections.

Front & Rear Panel Function Controls

Before attempting any system interconnection, please familiarize yourself with the front and rear panel controls of the Supremo. The descriptions below refer to the numbers and letters associated with the features in the diagram above.

Front Panel

1 STAND-BY/SETUP PUSH BUTTON

When in stand-by mode, push to switch in Operate mode. Instead to enter/exit setup mode press until red led turns off/on. When in Operate mode, push to switch in Stand-by mode.

WARNING: Always put in stand-by the DAC before switch-off the unit by rear panel switch.

2 STAND-BY LED INDICATOR

The **Stand-by LED** show the operating mode of your converter:

Glows red when the DAC is in Stand-by.

Off the DAC is ready to use.

If the DAC 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.

3 INPUT/SETUP DISPLAY

The three digit display shows the input source in operative mode and the available configurations in the setup mode.

4 DSD LED INDICATOR

This LED glows blue when a digital signal in DSD file format is present at the input.
The recognized frequency are: multiples (64x, 128x) of 44.1kHz and 48kHz.

5 FREQUENCY/SUBSETUP DISPLAY

In setup mode on the three digits appear the available options for one configuration (see the SETUP section). In operative mode when is selected a linked input, appear the sampling frequency of digital audio stream.

6 INPUT + PUSH BUTTON

Push this button to select an higher input or setup configuration.

7 INPUT – PUSH BUTTON

Push this button to select a lower input or setup configuration.

Rear Panel

Caution!
Switch Off the *Supremo* **when you need to connect or disconnect any cables.**

8 COAX INPUT (COAX 1)

Use this input to connect the DAC to the digital output of a source (CD transport, DAT tape, DVD player), using a 75 Ohm digital cable provided with RCA connectors (not shipped with the equipment).

9 COAX INPUT (COAX 2)
Use this input to connect the DAC to the digital output of a source (CD transport, DAT tape, DVD player), using a 75 Ohm digital cable provided with RCA connectors (not shipped with the equipment).

10 OPTICAL INPUT (OPT 1)
Use this input to connect the DAC to the digital output of a source (CD transport, DAT tape, DVD player), using a digital fiber optic cable (not shipped with the equipment).

11 OPTICAL INPUT (OPT 2)
Use this input to connect the DAC to the digital output of a source (CD transport, DAT tape, DVD player), using a digital fiber optic cable (not shipped with the equipment).

12 BALANCED INPUT (AES/EBU)
Use this input to connect the DAC to the digital output of a source (CD transport, DAT tape, DVD player), using a 110 Ohm digital cable provided with XLR connectors (not shipped with the equipment).

13 USB INPUT
Use this input to connect the DAC to the USB2.0 port of a computer (PC/MAC) using a certified USB2.0 cable (shipped with the equipment).

14 I2S DIGITAL INPUT
Use this input to connect the DAC to the digital I2S output. (North Star Design CD-Transport). This interface accepts also DSD data.

15 BALANCED ANALOGUE OUTPUT
Use this output to connect the DAC to the input of a preamplifier or integrated amplifier using interconnect provided with XLR connectors (not shipped with the equipment).

16 UNBALANCED ANALOGUE OUTPUT
Use this output to connect the DAC to the input of a preamplifier or integrated amplifier using interconnect provided with RCA connectors (not shipped with the equipment).

The Supremo is equipped with hi-quality connectors. To take full advantage of the Supremo sonic quality, we recommend using high-quality interconnection cables; ask your North Star Design dealer.

17 AC MAINS INLET AND AC MAINS SWITCH
Standard IEC power cords is provided with the Supremo. High quality power cords will improve the sonic performances; ask your North Star Design dealer.

The North Star Design Supremo 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 converter. This switch may be used to disconnect the power supply from the AC mains without having to actually unplug the dac from the wall outlet. If you plan to be away for an extended period, or have any other reason to turn the dac 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 DAC from the AC mains and contact your North Star Design dealer for assistance.

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

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

SETUP

In **STAND-BY** mode, press the stand-by button until the red led turns off; you will enter in SETUP mode.

There are 3 different setups for the *Supremo*:

PCM filter characteristics
- Hi high slope of digital filter
- Lo low slope of digital filter

DSD filter characteristics
- 47 fix -3dB bandwith at 47KHz
- 50 fix -3dB bandwith at 50KHz
- 60 fix -3dB bandwith at 60Khz
- 70 fix -3dB bandwith at 70Khz

Ph phase Submenu
- 0 degree output phase (Normal mode)
- 180 degree output phase

PLL bandwidth
- Lo lowest locked bandwidth
- Mid medium locked bandwidth
- Hi highest locked bandwidth

To scroll through the setup, press alternatively input +/- buttons. To enter in the subsetup menu press one time stand-by button. You will notice right display appears blinking. Similarly to move inside this menu, press input +/- buttons. To confirm press again one time stand-by button.

After you have modified one or more of setup settings, press the stand-by button again for a few seconds. You will return to the stand-by mode again.

Driver Installation

The Supremo, in USB mode configuration, need proprietary drivers to be installed in the PC.
Drivers are available for different Operative Systems:

PC   XP, Vista/Win7/Win8 (both 32 and 64 bits)

Installation

1) connect the Supremo input at one of the USB2.0 port of your PC
2) your PC will search for new drivers
3) insert the CD-ROM with drivers supplied with the unit
4) the drivers will be installed automatically
5) select in the Audio preferences of the OS, like preferred output device, the North Star Design PCM-DSD USB Audio Interface

For Mac Users are not required any Drivers.

TECHNICAL SPECIFICATIONS

DIGITAL INPUT FREQUENCY	44.1 kHz to 384kHz, up to 32 bit – native DSD x64 – x128 (352,8-384kHz and native DSD on USB and I2S only)
DYNAMIC RANGE	132dB
DISTORTION	0,00010% 0dB (balanced output)
DIGITAL INPUT	4 S/PDIF (2 RCA coax, 2 TOSLINK) 1 AES/EBU (XLR)1 USB2.0 1 I2S
ANALOGUE OUTPUT UNBALANCED	1 pair per channel on RCA connectors
ANALOGUE OUTPUT BALANCED	1 pair per channel on XLR connectors
MAIN VOLTAGE/CONSUMPTION	230/115V 50/60Hz 10W – Stand-by 0,5W
DIMENSIONS	17 in (W) x 7.5 in (D) x 3.1 in (H) 43.5 cm (W) x 17 cm (D) x 8 cm (H)
WEIGHT	11,6lbs. (5,7Kg)

CD-ROM installation drivers

NOTES

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