north star design

MODEL192

**High Performance
D/A Converter
192kHz-24bit**

User Manual

Serial #: _____

Revision 2 – 1/9/2005

CE 01

Thank you for purchasing the North Star Design Model 192. The Model 192 is an extraordinary value in advanced Digital-to-Analog Conversion. Featuring a state-of-the-art DAC chipset, the Model 192 offers reference-level audio performance. The Model 192 is able to convert inputs from 16-Bit / 44.1KHz through 24-Bit / 192KHz and can oversample the digital signal to 192kHz before the analog conversion. The Model 192 forms an integral part of the enthusiast's modern high-fidelity system.

PRODUCT DESCRIPTION

The Model 192 is based on the latest-generation Crystal Semiconductors CS4396 chipset CS8420 input receiver and Nippon Precision Circuits SM5849AF upsampler. The CS 8420 accepts up to 96KHz S/PDIF-encoded datastreams while the I2S input may accept 24-Bit / 192KHz data.

Five inputs are provided: two S/PDIF via coax, one AES/EBU via balanced XLR, one optical TosLink and one I2S via RJ45 connector. Engaging the Model 192 I2S Direct Mode setting bypasses the input receiver and allows the Model 192 to throughput up to 24-Bit / 192KHz.

A single pair of single-ended outputs are driven by a high-current, Class-A output stage.

OPERATING INSTRUCTIONS:

CAUTION:

1. **Be careful handling the mains cable**
   Please, pay attention not to damage or stretch the mains cable. Otherwise, risk of electric shock or damage can arise. Keep tightly the mains plug when pulling it away from the wall socket, never pull the cable.
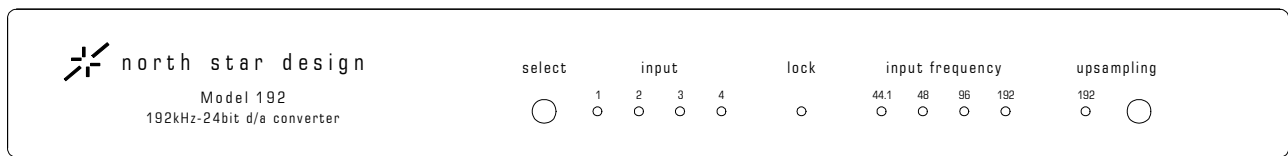
2. **Don't remove the upper cover**
   To avoid shock hazard, please don't remove the upper cover when the equipment is connected to a mains socket or to any other equipment. Refer to the appropriate section of this manual for the digital input settings.

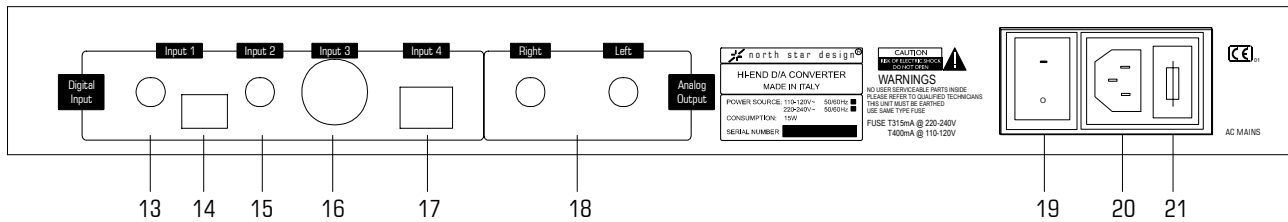3. **Don't insert any object into the equipment**
   Don't insert metallic objects into the equipment and pay attention not to throw liquids on it. Otherwise, risk of electric shock or damage can arise.

NOTE:

This equipment is not shipped with any mains or interconnect cable. This items' quality is a main factor for the achievement of the best sonic performance; they must be chosen taking into account the synergy with the other parts of the hi-fi system.

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Model 192
192kHz-24bit d/a converter

select   input   lock   input frequency   upsampling

1 2 3 4   44.1 48 96 192   192

1   2   3   4   5   6   7   8   9   10   11   12

Digital Input   Input 1   Input 2   Input 3   Input 4   Right   Left   Analog Output

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HI-END D/A CONVERTER
MADE IN ITALY
POWER SOURCE: 110-120V~   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 QUALIFIED TECHNICIANS
THIS UNIT MUST BE EARTHED
USE SAME TYPE FUSE
FUSE T315mA @ 220-240V
      T400mA @ 110-120V

AC MAINS

13   14   15   16   17   18   19   20   21

1. Input selection pushbutton
Push to switch from Input 1 to Input 2, then to Input 3, Input 4 and back to Input 1.

2. Input 1 selection led
Glows blue when Input 1 is selected.

3. Input 2 selection led
Glows blue when Input 2 is selected.

4. Input 3 selection led
Glows blue when Input 3 is selected.

5. Input 4 selection led
Glows blue when Input 4 is selected. If no digital signal is present on I2S input, the input switch   automatically on input1.

6. Lock Led
It will be off when no signal is fed into any digital input. Feeding a digital signal through an enabled input will turn this led to blue.

7. 44.1 Led
This led glowing blue while the lock led glows blue means that a 44.1 KHz sampling rate has been recognized on any enabled input, e.g. when connecting a CD transport.

8. 48 Led
This led glowing blue while the lock led glows blue means that a 48 KHz sampling rate has been recognized on any enabled input, e.g. when connecting a DAT tape.

9. 96 Led

This led glowing blue while the lock led glows blue means that a 96 KHz sampling rate has been recognized on any enabled input, e.g. when connecting a DVD audio (96/24) player.

10. 192 Led

This led glowing blue while the lock led glows blue means that a 192 KHz sampling rate has been recognized on I2S input.

11. Upsampling led

This led glowing blue while the oversampling function is on.

12. Upsampling selection pushbutton

Push to switch from upsampling to direct function.

13. Coaxial Input (S/PDIF) 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).

14. Optical Input (TOSLINK) 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).

15. Coaxial Input (S/PDIF) 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).

16. Balanced Input (AES/EBU) 3

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).

17. I2S Digital Input 4

Use this input to connect the DAC to the digital I2S output.

18. Analog 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).

19. Mains Switch

20. Mains Socket

Plug in the mains cable before connecting its other end to the wall socket. Check the equipment you own is set to the mains voltage used in your country.

21. Mains Fuse Holder

Use same type fuses only.

TECHNICAL SPECIFICATIONS

Input signals:	32kHz to 192kHz, up to 24 bit
Dynamic Range:	120dB
S/N ratio:	117dB
Inputs:	3 S/PDIF (2 RCA coax and 1 Toslink optical), 1 AES/EBU (XLR balanced) 1 I2S (RJ45)
Output sockets:	Gold plated RCA posts
Mains/Power Consumption:	230/115V 50/60Hz 15VA
Chassis size:	43,3 x 17 x 5 cm - 17 x 6.7 x 1.95 in
Weight (with envelope):	5.4 Kg – 11.9 lbs