

NuPrime uDSD

FCC Notice - Declaration of Conformity Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: Only peripherals complying with the FCC class B limits may be attached to this equipment.

Changes or modifications made to this equipment, not expressly approved by us or parties authorized by us could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice for customers: The following information is only applicable to equipment sold in countries applying EU Directives.

EU Declaration of Conformity

CE Hereby, NuPrime Audio, Inc. declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

The manufacturer of this product is NuPrime Audio, Inc., 1712 Pioneer Ave. Ste 1817, Cheyenne, Wyoming 82001, USA.

The Authorized Representative for EMC and product safety is NuPrime Audio, Inc., 1712 Pioneer Ave. Ste 1817, Cheyenne, Wyoming 82001, USA.

For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

For customers in Europe



Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your

household waste disposal service or the shop where you purchased the product.

SAFETY INSTRUCTIONS

There are two categories of Safety Instructions included in this manual:

- Product Warnings, (i.e., what must never be done to assure avoiding those hazards that could cause bodily injury or property damage); and
- User Directions (i.e., what must always be done to assure the safe use of your device).

The Safety Instructions contained in this manual have been categorized in accordance with the seriousness of the potential hazards through the use of Signal Words. Those Signal Words, and their intended meanings, are as follows:

DANGER: Indicates that a failure to observe the Safety Instructions could result in death or catastrophic bodily injury.

WARNING: Indicates that a failure to observe the Safety Instructions could result in serious bodily injury.

CAUTION: Indicates that a failure to observe the Safety Instructions could result in minor bodily injury or property damage.

NOTE: Designates important information that relates to activities and/or conditions that might result in loss of data and/or damage to your device.

Safe Use and Operation of Your Device

This equipment emits stray RF energy and will interfere with the reception of signals by airborne electronic navigational devices or medical devices. Do not operate this equipment near any sensitive medical devices.

WARNING: Never attempt to disassemble, repair or make any modification to your device. Disassembly, modification or any attempt at repair could cause bodily injury or property damage, as well as damage to the device itself.

WARNING: Your device is not a toy. Never allow children to play with your device. Misuse, rough or improper handling of your device by children could result in serious bodily injury for any of the enumerated safety warnings in this manual. In addition, always keep all accessories and components out of the reach of small children as small parts might present a choking hazard. Seek immediate medical attention if choking occurs or if any small part has been swallowed.

CAUTION: Never raise the sound volume level too high when using your device with earphones. An excessive sound volume level could cause damage to your hearing.

Read all the instructions before connecting or operating the component.

Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Do not use this unit near water.

Company Background

In 2005, NuForce invented an amplifier that utilizes self-oscillating switching principles in an analog-based topology (US patent #7,221,216) as a significant departure from bulky Class A/AB designs using tubes or transistors, and Class-D digital designs that convert signals into digital data. Thanks in full measure to unique innovations; the NuForce Reference 9 amp received the Power Amp of The Year 2005 award from The Absolute Sound, a prestigious American audiophile magazine. Subsequent versions of the Reference 9 received similar awards in Japan and France. In the years that follow, NuForce has grown to include a full line of Mobility, Home Theater and Home Stereo products.

In 2014, having decided to focus on mobility products, NuForce sold the high-end line along with its technology to investors who then created NuPrime Audio. Under the leadership of NuForce co-founder and original CEO, NuPrime has assembled a design team comprised of talented engineers who earlier worked on NuForce's high-end line along with newly recruited experts in switching-power circuit design.

From Hi-Res to Extreme Resolution

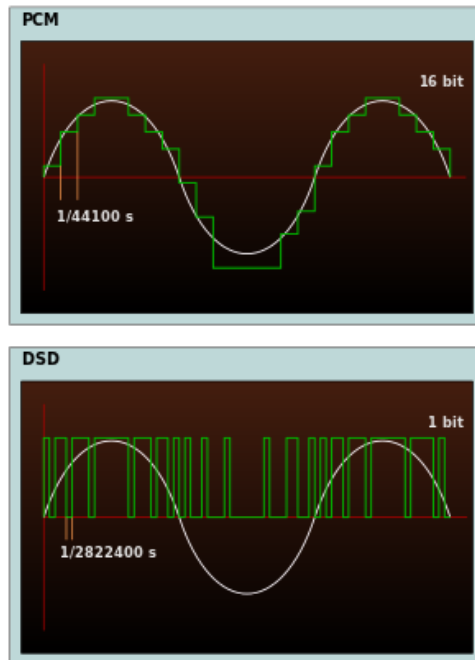
High-volume storage has become cheap enough for the proliferation of hi-res music beyond CD quality (16-bit/44.1kHz). Storing 24-bit/96 kHz or 192 kHz music with PCM encoding in uncompressed format (typically WAV) or lossless compression format (such as FLAC, M4A, WMA) has become standard practice for audio enthusiasts.

Music is typically recorded in 24 or 32-bit PCM or DSD format at the recording studio. It is then converted to lower resolution format for mass-market distribution.

Pulse-code modulation (PCM) is a method used to digitally represent sampled analog signals. It is the standard form of digital audio in computers, compact discs, digital telephony and other digital audio applications. In a PCM stream, the amplitude of the analog signal is sampled regularly at uniform intervals and each sample is quantized to the nearest value within a range of digital steps. A PCM stream has two basic properties that determine the stream's fidelity to the original analog signal: the sampling rate, which is the number of times per second that samples are taken, and the bit depth, which determines the number of possible digital values that can be used to represent each sample. DXD is simply PCM 24-bit/352.8 kHz.

Direct-Stream Digital (DSD) is the trademark name used by Sony and Philips for their system of digitally recreating audible signals for the Super Audio CD (SACD). DSD uses pulse-density modulation encoding – a technology to store audio signals on digital storage media that are used for the SACD. The

data is stored as delta-sigma modulated digital audio, a sequence of single-bit values at a sampling rate of 2.8224 MHz (64 times the CD audio sampling rate of 44.1 kHz, but only at 1 / 32768 6-bit resolution).



Comparing PCM and DSD

Identical data in DSD64 (2.8 MHz sampling rate) format takes up approximately 20% more storage space than 24-bit/96kHz format. The NuPrime DAC-10H is designed to faithfully reproduce music irrespective of format.



The NuPrime uDSD, a significantly advanced hi-resolution USB-powered portable DAC, connects your personal computer's audio to your home stereo, desktop sound system and headphones.

Sound Quality

Supporting the latest high-resolution music formats, the NuPrime uDSD, is capable of decoding sample rates ranging from 44.1kHz to 384kHz (PCM) as well as native DSD decoding ranging from DSD 64 up to DSD 256.

Powerful Headphone Amplifier

The NuPrime uDSD's powerful headphone amplifier allows the unit to drive the market's most sophisticated headphones.

Build and Design

A palm-sized aluminum enclosure provides durability and elegant style. With regard to internals or textured aluminum package, the uDSD bespeaks exquisite attention to detail and build quality.

Flexible Connectivity

The uDSD comes with Coaxial S/PDIF and 2V RCA Analog outputs for compatibility with a broad variety of systems. With its native DSD-format

decoding capability, uDSD is ideal for upgrading existing high-end non-DSD DACs.

Features:

- 24-bit/384kHz and native DSD 256 support
- Discrete USB audio receiver and D/A converter, with coaxial S/PDIF output
- Asynchronous transfer mode for doubled jitter-reduction at data input and over-sampling filter stages
- High-performance headphone amplifier
- High voltage 2V analog output
- Coaxial S/PDIF output
- High-quality analog volume control
- Diminutive size
- USB powered, no external power supply required
- Works with Windows 7/8 and Mac OS.

Specifications

Input:

- USB 1.1, 2.0, compatible.

Outputs:

- Analog Stereo RCA Out.
- Digital Coaxial Out.
- Headphone Amplifier Out (3.5 mm-jack socket).

- USB sampling rates: 44.1,48,88.2,96,176.4,192,352.8,384KHz and DSD 2.8,5.6,11.2MHz.
- Bit resolution: 16-24-bits.
- Output: Analog RCA 2V rms (DAC out).
- Headphone output: max 140mW x 2 @ 32 ohm.
- Dynamic range: 98dB.
- S/N ratio: 112 dB.
- THD+N < 0.01%.
- Power: USB-Bus powered, 150mA/5V.

USB Playback Guide:

To run the NuPrime uDSD on Mac– PCM:

1. Power on NuPrime uDSD, select USB input. The device will enumerate as a USB Audio device on your Mac.
2. In Audio Midi Setup, select the “NuPrime uDSD” device as your default Input and Output device.
3. The sample rate of the device can be selected using the drop down menu.
4. The audio is also output over SPDIF.

To run the NuPrime uDSD on Mac– DSD:

1. Install playback software on MAC.
Ex: Audirvana 15 days free http://audirvana.com/site/?page_id=112
2. In Preferences Setup, Audio System selects the “NuPrime uDSD” as your Default Device.
3. The Native DSD Capability select the “DSD Over PCM standard 1.0”
4. SPDIF output is not working on DSD playback.

To run the NuPrime uDSD on Windows – PCM:

1. Please visit www.nuprimeaudio.com and download the latest driver.



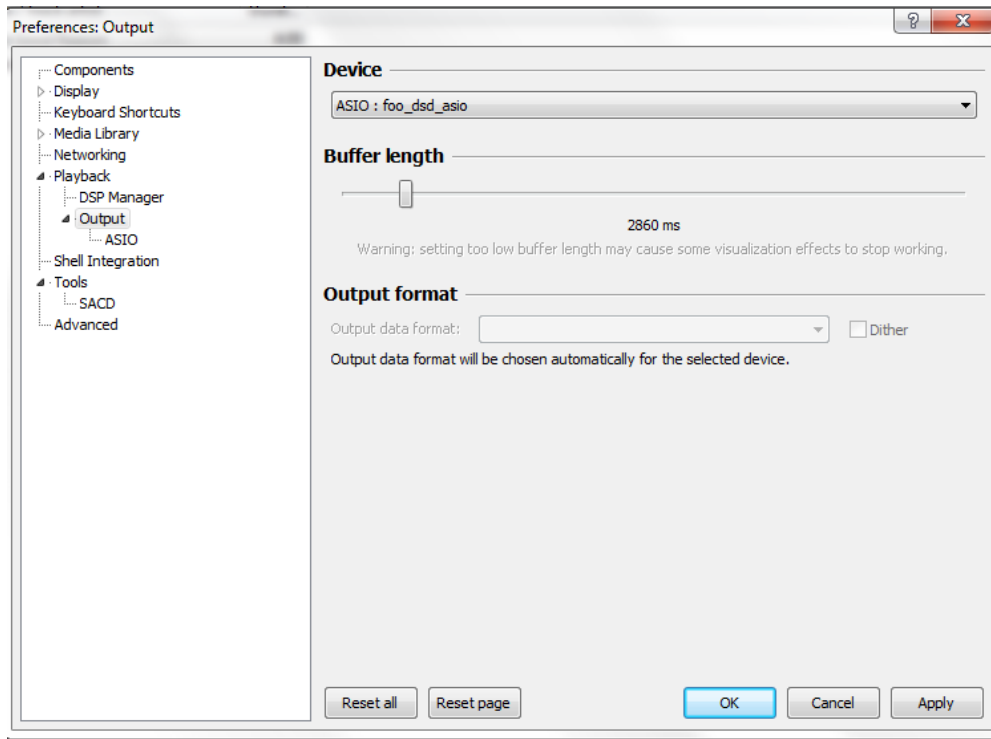
2. Connect computer to USB DAC and power on NuPrime uDSD, select USB DAC input. The device will enumerate as a USB Audio device on your PC.
3. Install the latest driver just download via NuPrime website.
4. In Control Panel->Sound, select “NuPrime uDSD” as your Default Device.

To run the NuPrime uDSD on Windows – DSD

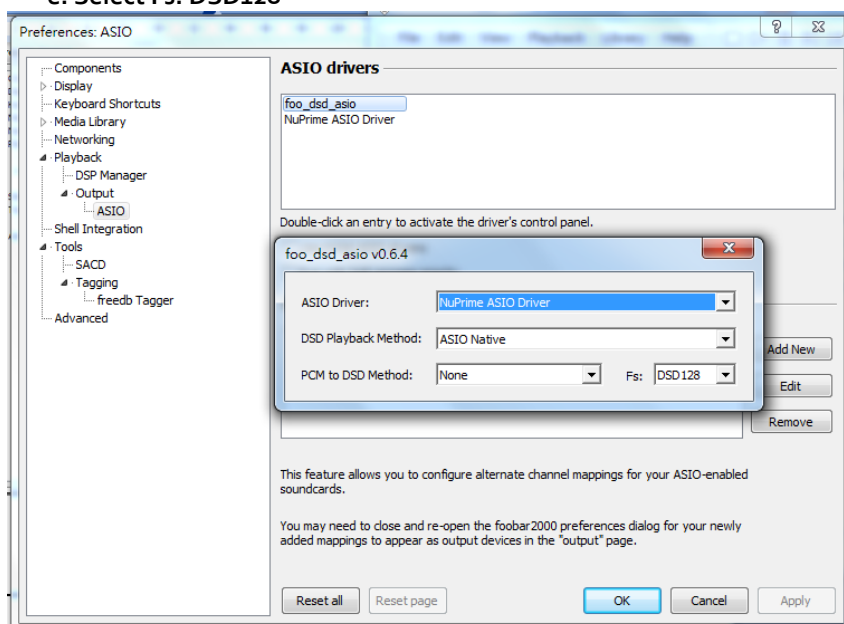
Install playback software on Windows

1. Install the Foobar media player
<http://www.foobar2000.org/download>
2. Download the 'SACD' plugin <http://sourceforge.net/projects/sacddecoder/files/latest/download>
 - a. To install, in Foobar goto File->Preferences and select Components
 - b. Click the Install... button
 - c. Select the zip file
 - d. Click Apply (foobar will restart)
3. Download the ASIO plugin from http://www.foobar2000.org/components/view/foo_out_asio
 - a. Install the plugin
 - b. Click Apply (foobar will restart)

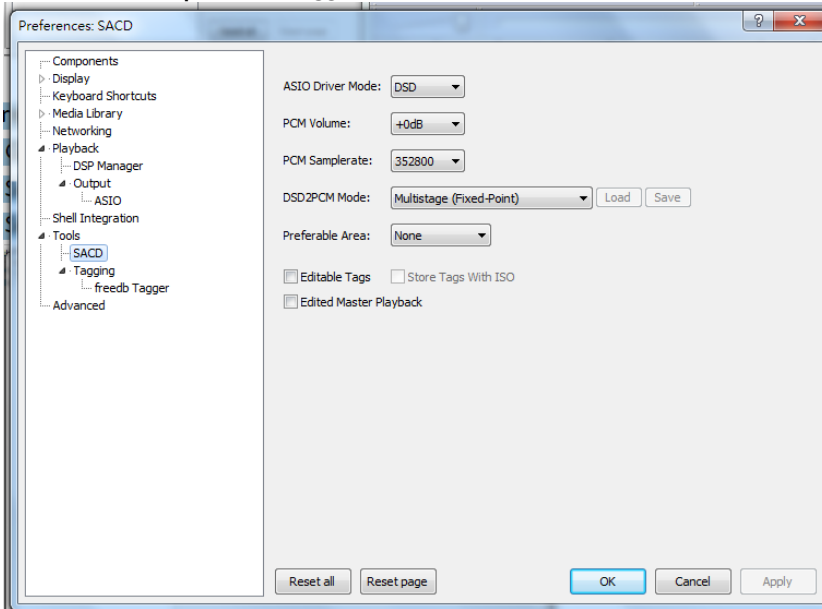
4. Configure the Output Device
 - a. Go to Playback->Output
 - b. Select the Device: ASIO foo_dsd_asio



5. Configure the ASIO output
 - a. Go to Playback->Output->ASIO, double-click on foo_dsd_asio
 - b. Select the NuPrime ASIO Driver
 - c. Select ASIO Native
 - d. Select PCM to DSD Method: None
 - e. Select Fs: DSD128



6. Configure the SACD plugin to play DSD (and not convert from DSD to PCM)
 - a. Go to Tools->SACD
 - b. Set ASIO Driver Mode to DSD
 - c. Set PCM Sample Rate to 352800



NuPrime's Limited Warranty and Limitation of Liabilities

ADDITIONAL RIGHTS

FOR CONSUMERS, WHO ARE COVERED BY CONSUMER PROTECTION LAWS OR REGULATIONS IN THEIR COUNTRY OF PURCHASE OR, IF DIFFERENT, THEIR COUNTRY OF RESIDENCE, THE BENEFITS CONFERRED BY THIS WARRANTY ARE IN ADDITION TO ALL RIGHTS AND REMEDIES CONVEYED BY SUCH CONSUMER PROTECTION LAWS AND REGULATIONS. THIS WARRANTY DOES NOT EXCLUDE, LIMIT OR SUSPEND ANY RIGHTS OF CONSUMERS ARISING OUT OF NONCONFORMITY WITH A SALES CONTRACT. SOME COUNTRIES, STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION MAY LAST, SO THE LIMITATIONS OR EXCLUSIONS DESCRIBED BELOW MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY COUNTRY, STATE OR PROVINCE. THIS LIMITED WARRANTY IS GOVERNED BY AND CONSTRUED UNDER THE LAWS OF THE COUNTRY IN WHICH THE PRODUCT PURCHASE TOOK PLACE.

LIMITED WARRANTY

For a period of ONE (1) YEAR from the date of retail purchase by the original end-user purchaser ("Warranty Period"), NuPrime warrants (in) this product against defects in materials and workmanship, and (ii) that each Product, unmodified and under normal use and conditions, will substantially comply with NuPrime' applicable written technical documentation for the Product. NuPrime reserves the right to make substitutions and modifications from time to time in the specifications of Products sold by NuPrime, provided that such substitutions or modifications do not materially affect overall Product performance.

If a hardware defect exists and a valid claim is received within the Warranty Period, at its option and to the extent permitted by law, NuPrime will (1) repair the hardware defect at no charge, using new or refurbished replacement parts, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or (3) refund the purchase price of the product. NuPrime may request that you replace defective parts with user-installable new or refurbished parts that NuPrime provides in fulfillment of its warranty obligation. A replacement product/part assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes NuPrime's property. When a refund is given, your product becomes NuPrime's property.

OBTAINING WARRANTY SERVICE

If you purchased the product in the U.S., deliver the product, at your expense, to any NuPrime Service Center located in the U.S. If you purchased the product outside of the U.S., deliver the product to any NuPrime Authorized Importer in the country where you purchased the product. Be aware, however, that not all countries have NuPrime Authorized Service Providers ("NASP") and not all Authorized Service Providers outside the country of purchase have all parts or replacement units for the product. If the product cannot be repaired or replaced in the country it is in, it may need to be sent to a different country or returned to the country of purchase at your expense for repair or replacement. If you seek service in a country that is not the country of original purchase, you will comply with all applicable import and export laws and regulations and be responsible for all custom duties, V.A.T. and other associated taxes and charges. Where international service is available, NuPrime may repair or exchange defective products and parts with comparable products and parts that comply with local standards.

You can always deliver the product to NuPrime's U.S. main service center for obtaining warranty service, however, you may have to pay for return shipping cost.

NuPrime may send you user-installable new or refurbished replacement product or parts to enable you to service or exchange your own product ("DIY Service"). Upon receipt of the replacement product or part, the original product or part becomes the property of NuPrime and you agree to follow instructions, including, if required, arranging the return of original product or part to NuPrime in a timely manner.

When providing DIY Service requiring the return of the original product or part, NuPrime may require a credit card authorization as security for the retail price of the replacement product or part and applicable shipping costs. If you follow instructions, NuPrime will cancel the credit card authorization, so you will not be charged for the product or part and shipping costs. If you fail to return the replaced product or part as instructed or the replaced product or part is not eligible for warranty service, NuPrime will charge the credit card for the authorized amount.

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to hardware products manufactured by or for NuPrime that can be identified by the "NuPrime" trademark, trade name, or logo affixed to them. The Limited Warranty does not apply to any non-NuPrime hardware products or any accessories, even if packaged or sold with NuPrime hardware. Non-NuPrime manufacturers, suppliers, may provide their own warranties. Other accessories distributed by NuPrime under the NuPrime brand name are not covered under this Limited Warranty. This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, liquid contact, fire, earthquake, non-NuPrime products, or other external causes; (b) to damage caused by service performed by anyone who is not a NASP; (c) to a product or a part that has been modified without the written permission of NuPrime; (d) to consumable parts, such as batteries, or protective coatings designed to

diminish over time unless failure has occurred due to a defect in materials or workmanship; (e) to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports; (f) to defects caused by normal wear and tear or otherwise due to the normal aging of the product; or (g) if any NuPrime serial number has been removed or defaced.

Important: Do not open the hardware product. Opening the hardware product may cause damage that is not covered by this warranty. Only NuPrime or a NASP should perform service on this hardware product.

THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. NUPRIME SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF NUPRIME CANNOT LAWFULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. No NuPrime reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

NUPRIME IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE TO OR REPLACEMENT OF EQUIPMENT AND PROPERTY, ANY COSTS OF RECOVERING, REPROGRAMMING, OR REPRODUCING ANY PROGRAM OR DATA STORED IN OR USED WITH NUPRIME PRODUCTS, AND ANY FAILURE TO MAINTAIN THE CONFIDENTIALITY OF DATA STORED ON THE PRODUCT. NUPRIME SPECIFICALLY DOES NOT REPRESENT THAT IT WILL BE ABLE TO REPAIR ANY PRODUCT UNDER THIS WARRANTY OR MAKE A PRODUCT EXCHANGE WITHOUT RISK TO OR LOSS OF PROGRAMS OR DATA.

Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitations on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state or province.

Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service.

REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER.

NUPRIME SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.