

# VERITAS User Guide

## Software version 1.0.1

### Introduction

VERITAS is Resonance's latest Digital to Audio Converter (DAC). It uses the second generation ESS "PRO" series of ESS's SABRE DACS. It is the first product to market that uses the HyperStream II digital modulator. This time it is about the sound, the results are in: 19 out of 20 audiophiles judge the sound to be improved. VERITAS delivers this improved sound.

### Overview

VERITAS accepts digital data via AES, S/PDIF (2 sources, RCA 1 & 2) , TosLink (TORX) and USB interfaces. Over USB it uses Audio 2.0. Internally, VERITAS processes data up to 384ks/S within a 64 bit data path. VERITAS is a hardware engine – to manage noise, power consumption, clock jitter and audio artifacts the absolute minimum of digital activity is used.

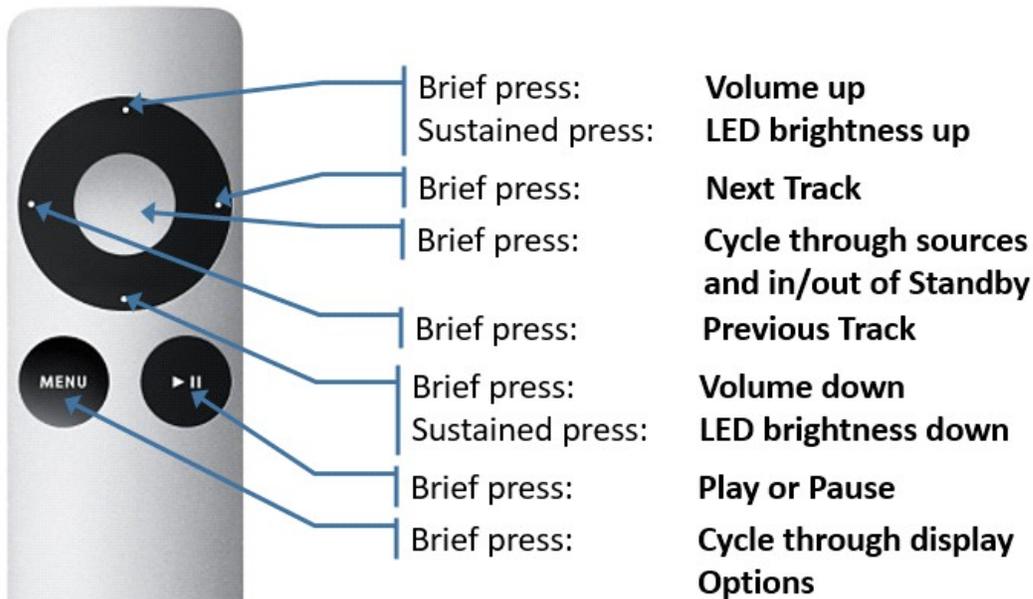
VERITAS is always-on – there is no power switch – the hardware boots-up on application of the power. VERITAS accepts world-wide power specifications: there is no need to set 120v/240v or similar. Always-on increases lifetime and audio quality – temperatures changes are the source of electronic degradation, and always-on minimizes electrical and thermal stress. Despite being always-on, VERITAS meets the most stringent EEC power limitations: a fraction of a watt is consumed when the unit enters the sleep mode.

VERITAS delivers the Stereo analog audio output to differential XLR and single-ended RCA analog outputs simultaneously. The Red RCA is the single-ended 2V RMS analog output to the Right Channel, the White RCA is the single-ended 2V RMS output to the Left Channel. The male XLR output nearest the edge of the unit, on the right when viewed from the front, is the differential 4v RMS analog output to the Right Channel, the male XLR output nearest the center of the unit, on the left when viewed from the front, is the differential 4v RMS analog output to the Left Channel.

VERITAS requires the Resonance Audio 2.0 driver on MS Windows, on the MAC computers no special driver is needed. Refer to the Resonance WWW site for the Audio 2.0 driver on Windows.

Resonance may update and improve the VERITAS software from time to time. You may check for the updates, download and install them from the WWW site.

## Operation Notes



### Remote Control

An Apple IR Remote is included with your unit. This is a 'standard' remote meaning that no reprogramming has occurred.

*Figure 1* here above shows the function keys of the remote.

### Front Panel Display

Three parameters are displayed simultaneously on the VERITAS display: Volume level, Data Rate and Data Source. The display is divided into three sections: the major parameter is displayed in large characters at the top centre, the two minor parameters are displayed bottom left and bottom right in smaller characters.

- The choice of which is the major parameter and which are the minor parameters is changed by pressing the menu button on the IR Remote.

Five digital data sources available and “sleep”, or low power mode, is selectable.

- Data sources and sleep mode are selected by pressing the centre of the ring on the IR Remote.
- Each press of the centre button cycles through the data source and sleep mode in sequence: Sleep => TORX (TosLink Optical input) => RCA2 (S/PDIF Bottom Orange socket) => RCA1 (S/PDIF Top Orange socket) => AES (Female XLR) => USB (Type B connector, USB Audio 2.0) => Sleep

Volume level is adjustable via the Rotary Knob on the front of the unit, or via the “Up” and “Down” dots on the IR Remote ring. (“Up” at the 12 o’clock position, “Down” at the 6 o’clock position). The volume control is digital, operating in a 64-bit data path. For audiophiles who prefer to use an analog volume control, VERITAS provides a FIXED mode. If the volume is increased above 0db the unit enters FIXED mode where full-scale analog output (2V RMS RCA and 4V RMS XLR) is delivered for full-scale digital input, digital volume control is bypassed.



Major parameter: **Volume at FIXED**  
 1<sup>st</sup> Minor parameter: **Data Rate 44.1ks/S**  
 2<sup>nd</sup> Minor parameter: **Source at USB**

**Rotary / Push knob**  
 Rotate for volume  
 Brief push to cycle through sources and in/out of standby  
 Press and hold to activate filter selection, after which rotation selects the filter, brief push to exit filter selection

*Figure 2*

USB mode differs from the other digital input modes in that volume control commands are coordinated with the computer, specifically, requests to change the volume level are accepted from the rotary knob, from the IR Remote and also from the computer volume control events – such as keyboard volume up/down and mute. This allows applications such as YouTube, FooBar etc to change the volume level within the VERITAS unit. Similarly, volume control events from VERITAS are received by the application and change its volume level. However, FIXED mode ignores any USB instructions to change volume level (in FIXED mode the only computer issued USB command responded to is “mute” and “unmute”).

Certain application on the computer (such as FooBar) additionally respond to commands from VERITAS: Pause/Play and left/right presses on IR Remote will cause the player to pause, and skip to next or previous tracks respectively.

**Turning the VERITAS unit On**

Simply plug your unit into a power outlet and the logo lens will briefly turn red and the software version installed on the unit will be displayed on the OLED Screen before the logo turns blue to indicate that the unit is now ready to start receiving data. RCA and XLR connectors are available on the rear panel to connect the unit to your amplifier.

**Selecting USB Mode**

Connect the USB Cable supplied with your unit to your source computer and to the rear panel of your VERITAS unit. If your computer is a Windows based system you will need to download the Thesycon driver from our web site before moving on from this point. VERITAS is a USB Audio 2.0 device. If your source computer is a Mac or Linux based unit there is no need to download a driver of any type.

Select USB mode on the VERITAS unit using either the Apple remote or the rotary dial. The unit is now ready to accept music files from your computer.

### Toslink Data Receive mode (TORX)

Connect VERITAS to your Toslink device via an optical cable. Select 'TORX' input via the remote or by cycling through the input options via the rotary dial.

### AES, RCA 1, RCA2 Input options

Follow the same steps that you took when selecting USB and Toslink modes described above.

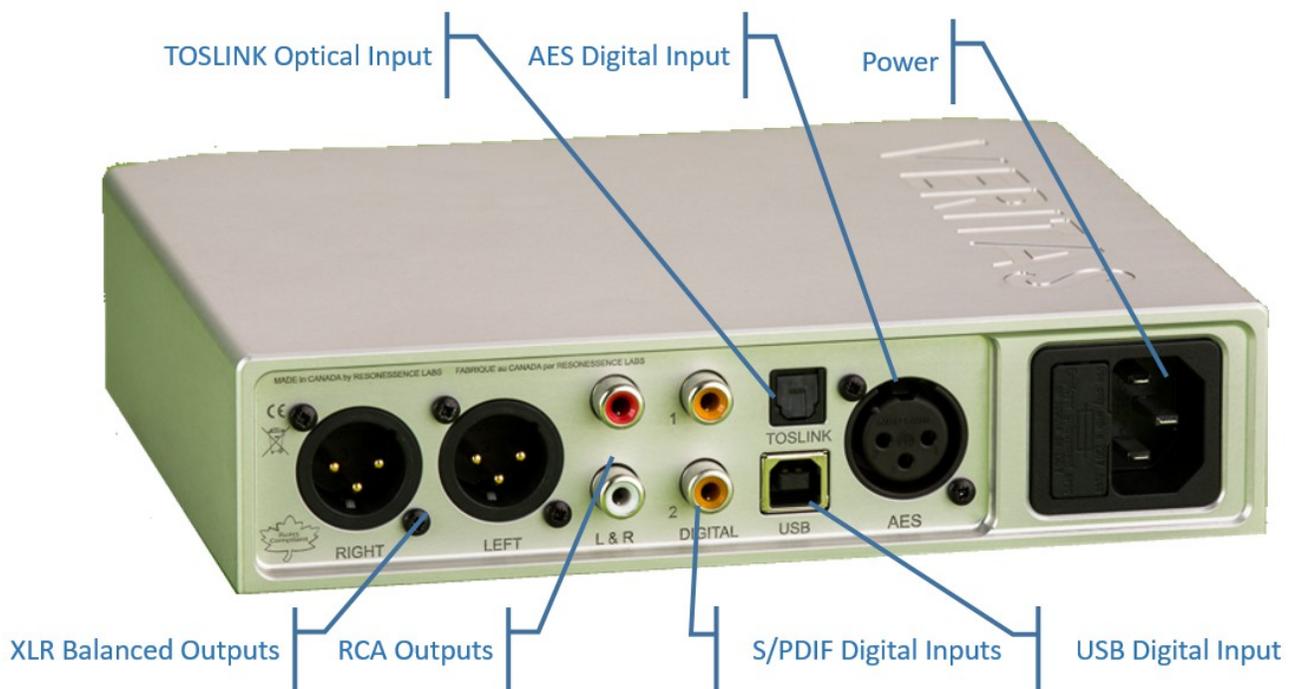
### Digital Filters

There are seven filter options available to choose from when playing 44.1kHz or 44.8kHz music files. Changing filters mode allows you to select a listening experience most suited to your system and music content.

The filter options are listed here, and Figure 2 describes how to change filter settings.

- 1: PRO Fast Roll off
- 2: PRO Slow Roll off
- 3: PRO Minimum Phase, Corrected
- 4: PRO Minimum Phase, Slow Roll off
- 5: PRO Linear Phase, Apodizing
- 6: PRO Linear Phase, Brick Wall
- 7: PRO Minimum Phase, Fast Roll off

### Detail of Connectors on the Back Panel



## Returning the INVICTA for Repair under Warranty

If you find any problems, faults, or unexpected performance in the INVICTA unit in the first three years of operation, it may well be covered by our warranty policy. The first step in returning a unit to Resonessence is to contact your local dealer, or directly by phone to us at our Canadian headquarters (778) 477-5536. We are in the North America Pacific Coast time zone and the country code for international calls is (1).

You may also email to [support@resonessence.com](mailto:support@resonessence.com). Please be prepared to provide the unit serial number when requesting support and be sure to include it in any Email.

Resonessence is pleased to provide a three year warranty under the terms described below, but reserves the right to determine whether the warranty applies in each specific case. We will attempt to determine if the warranty is applicable in the initial contact you make with us or our dealers, but it may be necessary to return the unit for inspection to make the determination.

All returned items require a Return Materials Authorization (RMA) number which you will receive from us along with the shipping address to which the unit should be returned. Please mark the shipping box with the RMA clearly visible on the outside. We can only accept units for return or repair with the RMA attached.

By shipping a unit to us you agree to the terms and conditions of our repair and return policy, outlined below.

### LIMITED WARRANTY

Subject to the conditions set forth below, for three years after the original purchase date of the unit (unless otherwise specified), Resonessence will repair, or if necessary replace, the unit at no additional cost, in the event of a defect in materials or workmanship of the hardware elements of the unit. This warranty is extended only to an original purchaser of the unit from an authorized reseller or directly from Resonessence. We do not provide a warranty of any kind if the unit has been purchased from an unrecognized or unauthorized reseller. We may request proof of purchase prior to providing any warranty service. We may, at our discretion, not extend the warranty to units used as rental units by a third party business if not approved by Resonessence or our authorized dealers.

This warranty only covers failures due to defects in materials or workmanship in the hardware elements of the system. Damages incurred while in shipping, or due to accident, inappropriate use of the unit, or power surges of any kind, are not covered. Alterations to the unit undertaken by unauthorized individuals or organizations are not covered. Damage incurred during attempted reverse engineering, design data extraction, or attempted internal measurements of any kind, are specifically excluded from any warranty.

Installation of any unapproved software, or external algorithms of any kind designed to expose or debug the operation of the unit, or to circumvent or otherwise interfere with the unit's unique identity code, causing damage or thereby erasing the unit's operating system or similar, are not covered by any warranty. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHERS WHICH VARY FROM STATE/JURISDICTION TO STATE/JURISDICTION.

### REPAIRS MADE UNDER WARRANTY

Resonessence will be responsible for all parts and labour necessary to fix defects in materials or workmanship of the hardware elements of the unit.

## NON-WARRANTY REPAIRS ETC.

Resonessence will charge for a minimum two hours of work at the prevailing hourly rate, plus all shipping costs, for any unit returned that does not qualify for the warranty service, or is returned for upgrade, technical audit or software re-initialization. Upon receipt of the unit, we will inform you of the estimated cost of the work and await your approval to proceed. Note that in all cases, even if you do not agree to the additional work, you will be responsible for the minimum two hours and shipping costs.

Parts and labour costs incurred to complete non-warranty work, even in the case where they exceed our estimate, will be your responsibility. REPLACED, REPAIRED OR UPGRADED PARTS

Any parts repaired or replaced either under warranty or as a paid service, are themselves warranted against defects in materials or workmanship for three years after the service date. Parts not replaced or repaired remain on the initial warranty schedule.

## SHIPPING

If a unit covered by warranty needs servicing during the first 30 days after the original purchase date, Resonessence will cover the cost of shipping the unit back, as well as the return shipping to you. After this initial 30 day period, and for three years after the original purchase date, Resonessence will only cover the cost of shipping the unit back to you, and you are responsible for the cost of shipping the unit to Resonessence. You are responsible for all shipping costs both to and from Resonessence for non-warranty work. You are responsible for paying all taxes, import duties, or similar fees imposed by foreign countries or other jurisdictions.

## LIMITS AND EXCLUSIONS

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