

Wyred 4 Sound

OWNER'S MANUAL

DAC-2 DSD & DSDse

Digital to Analog Converter **with volume control**

Get Wired, **WYRED 4 SOUND**

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DAC-v1.2
Software ver. 1.92

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Warranty Registration

****IMPORTANT****

Please take a moment to complete the warranty registration form located on our website. You **MUST** complete and submit this form within 30 days of purchase to activate your warranty.

Unpacking

The DAC packaging contains:

- 1 – Owners Manual
- 1 – 2.0 meter AC Power Cable
- 1 – 1.5 meter USB 2.0 A to B cable
- 1 – 1.5 meter DC trigger cable (3.5mm Mono cable)
- 1 – Remote control
- 2 – AAA Batteries
- 1 – Wyred 4 Sound USB Driver disk
- 1 – DAC-2 Digital to Analog converter

Carefully inspect your new DAC for any shipping damage. Please contact your dealer or Wyred 4 Sound directly if you notice any shipping damage or for anything you suspect is missing from your shipment. All packaging cartons will easily fold flat for convenient storage, and should be stored for future use should there be one.

Introduction

Wyred 4 Sound products are a perfect example of what is accomplished when practical engineering and knowledge are combined. All components are selected for the greatest possible functionality, durability, and most importantly, the quality. Wyred 4 Sounds' excellence in engineering will provide you with first-class performance and years of satisfaction.

Wyred 4 Sound audio products are designed to bring you closer to the beauty of your music. Our goal is to bring the performance of the recording right into your home with as little change as possible. As you can identify, our drive is focused on the customer. We know what others have to offer, so you can be sure that our value will be substantially more than theirs to keep the American made products desirable. We greatly appreciate your purchase and expect your complete satisfaction. Wyred 4 Sound hopes that you will continue to grow with us as we continue to provide the quality and functionality that you can learn to depend on.

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Design Features

We are proud to introduce the DAC-2 DSD and SE. During development of the original DAC-2 we recognized that digital streaming technology was progressing at a very fast rate. We created a modular circuit design which would permit future upgrades as the industry progressed, and we can now deliver that promise! The newly refined DAC-2 DSD includes upgrades to the USB interface and digital processing circuitry. These upgrades have extended its USB support to include, driverless (Mac / Linux), 32 bit 384kHz PCM, as well as DSD streaming.

The 9018 ESS Sabre DAC remains the heart of the DAC-2 DSD which is still widely regarded as the number one D-A converter in the industry. In our implementation we utilize the 8ch ESS chip in quad-differential mode meaning that there are actually 4 differential D-A conversion circuits for each channel in parallel. This helps achieve a spectacular S/N ratio and output drive capability. The ESS DAC was firstly selected for use in the DAC-2 for numerous reasons, one of which is the capability to process DSD signals which we are now proud to utilize. The I²S DSD format offers a jitter free solution to transmitting digital data from our cutting edge USB interface to the Sabre chip. Newly implemented technology and hardware now takes full advantage of this remarkable feature. Either DSD64 or DSD128 files can be flawlessly streamed in conjunction with standard PCM files. The upgraded interface instantly detects the native DSD data and routes the signal to the appropriate internal processors resulting in unparalleled sonic performance. It's time to begin expanding your DSD music collection!

Another bonus is the galvanically isolated I²S USB interface which guarantees zero opportunity for computer noise to interfere with the quality of the audio signal. Setup with your source via USB is simple because the new interface is driverless for Linux, Mac OSX 10.6-10.8, and supports Integer mode protocol. Windows XP and newer will require a quick driver install to begin streaming your favorite tracks. You can now be confident that the ultimate USB streaming solution is built into your DAC which ensures a clean and simple setup!

The DAC-2 can process signals up to 32 bits in length, and 200 kHz in sampling frequency through the coax and AES/EBU digital inputs. Because of the limitations of Optical transmission, only 176.4kHz has proven to be reliable through the TOSLINK inputs. You will find that some optical inputs will operate at rates up to 192 kHz, but is not guaranteed. Each of the Coax inputs are transformer coupled to isolate the source while maintaining proper loading. To ensure that the lowest input signal level will satisfy the digital conversion engine, the signals also pass through TTL buffers to maintain consistent signal integrity. To simplify input selection, the ESS chip is also used as the receiver chip and performs all the signal selection and routing. Automatic signal over-sampling is done internally to keep output filtering to a minimum, and is a crucial part of the jitter elimination. To ensure source immunity, the time domain jitter elimination is executed as the signal enters the DAC chip by re-clocking to the desired rate selected by the ESS chip.

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With an oversized toroid, more than 115,000uF of capacitance, 3 stages of filtering and 13 regulation points, the power-supply in the DAC-2 DSD is surely overbuilt. The analog output stages are powered by a separate power-supply to ensure isolation from the digital front-end. House-keeping voltages also use separate supplies to guarantee minimal supply contamination. The digital board is supplied with 7 out of the 13 dedicated regulators to ensure tight tolerances, and consistent power delivery.

The best part of the DAC-2 DSD is the proprietary discrete output stages which represent the beginning of the analog generation. You will quickly find why W4S spent so much time developing the cleanest, most transparent, and natural sounding output stage. Instead of choosing the simple path like many others, we took the "dirt road" and it paid off big time. Our grain-free sound stage reproduction is the product of our discrete dual-differential FET input amplifier stage which uses all Dale RN55d resistors for precise control. Because of the dual differential circuits, the completely balanced signal offers balanced and unbalanced outputs which both take advantage of common-mode rejection.

****Special Edition Only****

In fashion with a true special edition W4S unit, we have upgraded key components throughout the entire audio circuit starting with the main fuse at the power inlet. The Furutech rhodium plated, ceramic fuse has proven to be an excellent complement to the upgraded power supply of the DAC-2 DSD se. Further filtering is addressed with low loss - ultra fast recovery Shottkey diodes and a series of premium grade inductors that assist to stabilize the current as it enters the power supply. Power is then filtered through a series of custom low ESR capacitors after which it is regulated by newly designed discrete regulators. Our proprietary regulator design is 100+ times quieter and faster than the stock regulator! The start of the analog signal receives strategic treatment with our custom made naked Vishay Z-Foil resistors in 20 locations. Putting numbers on it, the stock Dale resistors offer 1% tolerance and +/-100ppm/°C temperature coefficient where our new resistors are 0.1% and +/-0.5ppm/°C respectively. As you can imagine, considerable aural gains are noticed with the substantial improvement over the stock resistors.

To complete the package, we decided to connect a 2 line display for easy verification of input selection, sample rate, and volume level. You will notice that when the DAC is locked onto a signal, the sample rate will be shown, when the signal is lost, the sample rate will read as ----. The up and down buttons on either side of the power button will allow for input and volume control up and down scrolling. From the front panel, you can toggle between volume and input selection mode by quickly pressing the power button. If you push and hold the power button in either input or volume mode, the DAC will power down. When the unit is off, you can quickly tap the power button to bring the unit back to life.

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Setup Menu

With a quick look at the setup options, you will quickly see how flexible the DAC-2 DSD really is. Each type of input can be configured to fixed or variable volume control, and you can also independently choose the level of each. Min/Max volume levels are also adjustable for each input to offer optimal flexibility for those low or high sensitivity systems. As you will find, other setup options include remote on/off, Discrete input select on/off, HT trigger in/remote trigger on, HT display dim level, I²S justification select for the HDMI input, IIR Bandwidth, Roll-off slope (fast/slow), and a default reset in case things get jumbled up.

To enter the Setup Menu, first turn the unit off from the power button on the front. Next push and hold the (UP) and (DOWN) buttons at the same time and press the (POWER) button once quickly. Once the menu is activated, you can use the up and down buttons to scroll through the different setup registers. Once the register is selected that you wish to adjust, tap the power button to select and enter that register. The menu will now be adjustable (EDIT MODE) and you can use the up/down buttons again to edit the settings. Once the desired setting has been selected and is displayed, tap the power button again to save and return to the main menu. You can now scroll through more settings and use the same method to make the changes needed. To exit and apply all changes, press and hold the power button in any main menu register (NOT IN EDIT MODE). The unit will then power down and will be ready for use.

Default Reset: Power the unit off from the power button on the front. Next push and hold the (UP) and (DOWN) buttons at the same time and then press and hold the (POWER) button. After several seconds you will see ----Reset---- on the screen, at which point you can release all buttons. Once the screen goes blank, a default reset has been applied which restores all settings to their factory configuration.

The Menu Map is as follows:

- IIR Bandwidth (<50k / 50k / 60k / 70k)
- Roll-off slope (Fast / Slow)
- I²S Type (I²S / Left justified / Right justified)
- Remote control select / Trigger in use (On-Off / Off-Off / On-On / Off-On)
-See "DC Trigger / HT Bypass" for more information
- DSD → HT Display Dim level (Off / Low / Medium / High)
DSD se → HT Display Dim level (Off / High)
- Coax Volume select (Variable / Fixed)
- Coax Minimum Volume level (0-70)
- Coax Maximum Volume level (0-70)

- Toslink Volume select (Variable / Fixed)
- Toslink Minimum Volume level (0-70)

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- Toslink Maximum Volume level (0-70)
- USB Volume select (Variable / Fixed)
- USB Minimum Volume level (0-70)
- USB Maximum Volume level (0-70)
- AES/EBU Volume select (Variable / Fixed)
- AES/EBU Minimum Volume level (0-70)
- AES/EBU Maximum Volume level (0-70)
- I²S Volume select (Variable / Fixed)
- I²S Minimum Volume level (0-70)
- I²S Maximum Volume level (0-70)
- Discrete Input (On / Off)



Front panel operation

The front of the DAC-2 DSD offers several features. You will notice a power button to turn the DAC on and off, as well as 2 others that are used for volume and input scrolling. Across the top of the DAC-2 display, you will see the selected input on the left and corresponding sample rate of the signal to the right. When the sample-rate number disappears, the signal lock has been lost. When a number is displayed, then the DAC is locked on to the rate which is displayed. On the bottom line, the output level will be displayed. When the unit is in fixed output mode, the display will state “Fixed” where the level is normally positioned.

Remote Control

The remote you will find with your DAC-2 is very basic but offers the convenience of controlling the DAC from a distance. To keep the cost down, the W4S remote is very simple but effective. If you find the need to, you can always program a universal remote to control the DAC as well. For your convenience we have uploaded the remote commands to the Logitech universal remote database.

The remote control functions offer features that you can't access otherwise. You will find that balance, phase and dim control are exclusive to the remote control. Distances of 20ft or so shouldn't cause a problem for the remote, but further than that are not recommended. The features of the remote are self-explanatory, but the picture to the side may help visualize things a bit.

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Please Note: Dim settings accessible from the remote

- The DAC-2 DSD se: (Constant ON / Automatic OFF after 2 seconds of no input from remote)
- The DAC-2 DSD: (High / Med / Low / Automatic OFF after 2 seconds of no input from remote)

USB Configuration

The USB interface of the DAC-2 DSD is driverless for Mac systems 10.6-10.8 as well as Linux. The included driver disk has standard drivers as well as ASIO drivers for Windows XP, Vista, 7, and 8.

When using the DAC with a Windows machine via USB you **MUST** install the drivers before connecting the USB device. Do not connect the DAC with a USB cable until the drivers are completely installed. You will notice that there are two variations of the standard Windows drivers which include an XP version and a version for Vista, 7, and 8. There is also a 32 bit and 64 bit version of the ASIO driver. Please be sure to install the correct driver for your system. The ASIO drivers are not required for audio playback but can be beneficial in some configurations. If you do choose to install the ASIO drivers be sure to install them after the standard driver installation is complete.



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A quick install guide for the standard drivers is located below. More detailed instructions can be found on the FAQ page of the Wyred 4 Sound website.

1. Locate the driver disk supplied with the unit.
 2. Insert the CD into the disk drive of your computer
 3. Locate the folder that shows the contents of the CD
 4. Open the folder that contains the proper drivers for you system (XP or Vista, 7, 8).
 5. You will need to double click the correct **Setup32** or **Setup64** file to initiate the install.
- Windows XP, Vista & 7:** If you are unsure whether you computer is running a 32-bit or 64-bit operating system you can check by clicking the **Start** button. Next right click **My Computer** and then select **Properties**.
- Windows XP will list **x64 Edition** in the details for 64 bit. If nothing is listed then the system is 32-bit.
 - Windows Vista and 7 will list **32-bit Operating System** or **64-bit Operating System** in the details.
- Windows 8:** To determine if your system is 32-bit or 64-bit first hover your mouse over the lower right hand corner. Next, click **Settings** and then select **PC info**.
- The *System type* will say either **32-bit Operating System** or **64-bit Operating System** in the details.

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6. Once the install process has begun follow the on screen instructions. The install wizard will prompt you when the process is complete. If you require more detailed instructions please visit the FAQ page of our website.
7. Connect the DAC to your computer with the supplied USB cable, power the DAC on, and select the USB input. You may be prompted by an install wizard that additional installation steps are required. Follow the on screen instructions. The install wizard will prompt you when the process is complete.
8. It is now necessary to select the Wyred 4 Sound USB interface as the default output device for your system. The device name will vary depending on the operating system you are using.
 - Windows XP:** Wyred 4 Sound Streaming
 - Windows Vista, 7, 8:** Digital Output / Wyred 4 Sound USB Driver 1.0.56
 - MAC OSX:** 32bit 384kHz DSD Interface

For Mac OSX you can locate the Audio Midi setup by following these instructions: Go to Finder----> Applications----> Utilities----> Audio Midi setup. Once you have reached the Midi setup you will need to select the W4S DAC-2 as the default output device and apply the setting.

For Windows OS you will need to locate the Audio output device (Manage Audio Devices) selection which can be found in the control panel located in the startup menu. Regardless of your system you will need to set the default output device to the Wyred 4 Sound interface. This setting will be part of the OS and not the media player.

****Please note: Additional output configuration and device selection may be required in your media player.****

9. The last step is easy.....Enjoy your music!

I²S Input

The W4S DAC-2 is equipped with a balanced I²S connection via HDMI. Please note that **the DAC will NOT offer playback from typical HDMI output connectors found on many DVD players (or similar devices)**, and damage can occur if connected to such. The HDMI connector was used for speed, noise rejection, and signal purity. With-in the connection, there are balanced versions of the I²S interface that offer superior connectivity to any source which can output the signal. At the time this manual was written, the only component capable of outputting the balanced I²S signal is the Wyred 4 Sound MS-2, PS Audio Perfect Wave Transport, Empirical Audio OR5 and the Channel Islands Transient MKII.

DC Trigger / HT Bypass

Your new DAC-2 is equipped with both a DC trigger output and input. The Trigger input is on the top and is used for the HT Bypass or Trigger on feature. In the setup menu under "REMOTE/TRIG" setting, you can select the trigger input to be configured as a HT Bypass or Remote turn-on feature.

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HT Bypass mode:

When the setting under “TRIG” is Off, then the HT Bypass on trigger-in is active. There are a pair of analog inputs (inner most pair of RCA’s) that should be connected to the pre-outs of a surround sound processor to be switched in to bypass the DAC circuitry when in HT mode. When either the HT input is selected, or the trigger input is activated, the HT inputs will be directly connected to the DAC outputs. This will offer a line-level pass thru that can be used to feed your power amps as if the DAC wasn’t there to begin with.

When in the HT Bypass feature, different display dim settings can be set in the set-up menu. These options are available in the setup menu. When going back to normal operation the pre-selected dim level will be restored regardless of the HT Dim level setting.

Remote Trigger On mode:

When the setting under “TRIG” is On, then the remote turn on with trigger-in is active. When the DC trigger input is applied, then the DAC will power up as if you pushed the power button on the front panel. The last used input will be selected upon power up. The trigger input signal needs to remain active for the unit to stay on. Once the trigger falls low, the unit will return to the off state.

Trigger output:

The lower trigger connector is used for a trigger output to remotely power up power amplifiers when the DAC is on or in HT mode. Connect one 3.5mm DC trigger cable from the trigger output of your source to the DAC trigger input to remotely activate the HT bypass or remote turn on feature (one or the other based on the set-up setting). Connect another 3.5mm cable from the trigger output of the DAC to the trigger input on your power amps if supplied with one. This will remotely activate your power amps anytime the DAC is operational even when in HT MODE.

Remote:

When the setting under “REMOTE” is Off it will disable the remote communication with the unit. This can be beneficial when you are operating the DAC with another Wyred component such as the STI or STP-SE in order to eliminate interference between them. A setting of On leaves the remote control active.

Fixed Volume mode

When scrolling through the setup menu will notice that the volume control can be selected to be either variable or fixed. When it is desired to use the DAC-2 with another preamp, you can configure the inputs to be fixed. This will set the output to the max level. If the output of the DAC is a little high for your system, you can reduce the Max setting for that input to limit or reduce the output level. Essentially, the Max setting can be used to reduce the output gain according to personal preference or to obtain the sweet-spot your preamp likes to be operated in. Another feature worthy of noting in the setup menu is that you can also disable the

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remote control if you plan on using the DAC with other W4S products that offer the same features such as the STP or STI products. This will eliminate any interference between the units when the remote is used.

Note: For the fixed mode to operate properly, you must set the Min level for that input to (0).

Bandwidth / IIR settings

There are several settings in the setup menu that most will not opt to change, but are there just in case... W4S has set the default settings for optimal sonics. Certain systems may benefit from changing these settings, and is really a personal preference more than anything. PCM Bandwidth selects the range of which the dac will filter the signal. Allowing higher bandwidths may introduce more information and noise than desired. IIR stands for Infinite Impulse Response. This is another setting that each customer should tune to their liking. Please note that these settings offer the slightest sonic differences and may not be really noticed or appreciated until the unit is fully "broken-in".

Volume Min / Max Settings

More features that can be found in the setup menu are volume Min/Max settings that can be set differently for each type of input. The volume table for the DAC is 70 steps in size and offers different size steps depending on the location of the step. When a system doesn't have enough gain to utilize the bottom several steps, you can remove them from the table by setting the volume minimum setting to with-in the playback range of the system. Because of the high output level of the DAC, it may offer the possibility of higher levels than needed. To prevent the possibility of amplifier overdrive, or possible speaker damage, we recommend setting the volume Max level with-in your personal preferences. The features listed above are some of the ways the DAC can adapt to everyone's system for optimal integration without the worry of having too much or too little gain.

Example:

When the minimum level for the corresponding input is set to 5, the maximum level will be 65. Basically the min level is the amount of steps skipped in the first position. When used, the min level is subtracted from the 70 possible steps total. With an inefficient system requiring a volume level of 12 to hear anything, a min level of 10 removes steps 1-10 and max equals 60. The volume table offers from 3db to 1dB steps as follows: 0 = mute; steps 1-9 = 3dB; steps 10-24 = 2dB; steps 25-70 = 1dB

Discrete Input Setting

Input selection with the standard remote is accomplished by scrolling up or down through all available inputs. While our remote control does not have the option for direct input selection, many universal remotes can support that feature. The Discrete Input Setting (on/off) enables or disables the direct input commands

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that can be received by the DAC-2 DSD. The database for the Logitech universal remotes has these commands pre-loaded for your convenience.

Powering your DAC

When power is applied to the unit and the switch located on the rear is in the on position, the DAC is powered up and ready to be turned on. If you would like to manually disconnect the power from the unit, the switch on the rear is where you would want to do so. To prevent power surges, we recommend using quality surge suppressor equipment. Turning the switch off on the rear of the unit will also protect against surges and spikes should some occur without proper protection.

Getting Connected

CAUTION: Disconnect the power cord or put the power switch in the off position before making any connections to your DAC to minimize the risk of possible amplifier, and loudspeaker damage. Power up your DAC **after** all final connections have been made and checked.

The input and output connections you will find on the DAC-2 are made of nothing but the best. The RCA (unbalanced) output, and Coax input jacks are made with high quality gold plated copper, and should be properly connected with interconnects of the same value. The Neutrik XLR (balanced) connectors are the finest balanced connector on the market, and are the best possible option for connecting your DAC to your preamplifier. The Toshiba Toslink inputs offer optimum connection with SPDIF sources without the possibility of creating any ground loops.

Using the new W4S power and interconnect cables would be a great way to ensure your system is closer to what we call “our reference”. We are now offering superior cables at an affordable rate that anyone can afford. For more information, please visit the web-site, or send an email to support@wyred4sound.com

“Break-in” period

Your new DAC will deliver outstanding performance right out of the box. However, you should plan on improvements as it reaches its normal operating temperature and once all of the components have a chance to “settle in”. Our experience has shown that the DAC has reached its’ potential after the initial 200 hours. One will find that the initial 100hours, the unit will start to shed the initial slight “brightness” and somewhat harsh transitions (as some will say). During the second 100 hours, your DAC will start to become more fluid, and smoother overall. Additional time is where the lesser of a change happens, and you will come to enjoy your new product for years to come. After the initial break in period, your unit will be ready to perform when powered on.

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Troubleshooting

No sound?

If you have your input source and speakers connected, and you can't get music to play, check the following:

1. Verify that the power cord is plugged in and that the outlet is powered up.
2. Check the front panel and make sure that the display lights up.
3. If the display is on and the DAC is locked onto a signal, increase the volume to a significant level to ensure the level is high enough for music playback.
4. If you can hear the slight turn on and off noise when the DAC is activated, but there still isn't any sound, make sure you are getting a signal to it.
5. Verify that the input is selecting the proper input for what you have connected, and is displaying a sample rate.
6. If the input is in the proper position and still no sound, then try replacing the interconnects to verify the connection between the DAC and source.
7. Verify that the interconnects are conducting by replacing them on a different set from a connection that you know works.
8. Now that you have interconnects that you know work, try connecting the DAC to another source that you know has worked in the past.

If you are still experiencing problems after checking all possibilities and using the resources provided please contact your dealer or Wyred 4 Sound directly for further assistance.

Because the DAC-2 is really an 8ch DAC inside, make sure that all sources (where applicable, ie: DVD players, cable/satellite boxes) are programmed in their setup menu to output 2ch PCM or stereo digital signals. In some cases, the DAC will actually try to decode multichannel formats, but will be unsuccessful because the DAC's outputs are tied together internally. If the DAC is playing music, then there is nothing to worry about, but if you get loud switching noises, or no sound at all, this is probably why.

Got Hum?

Is there too much hum or hiss coming out of your speakers? If you put your ear right next to the tweeter of your speaker, you should **barely** be able to hear any hiss in normal conditions, depending on amps. If the noise is **easily** heard at a distance, try putting your source on mute, or pause. If this eliminates the noise, it's inherent in the source. If the noise is still there when the preamplifier is muted, try disconnecting the inputs to the amplifier. If the noise is still there when the inputs are disconnected, and the inputs are shorted with shorting plugs, then your amplifier may need some servicing. If the noise is not there when the inputs are disconnected, try putting a cheater plug (ground isolator) on one or all components in order to

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eliminate a ground loop issue. NOTE: We only recommend using a ground isolator for trouble shooting purposes, and should be removed after the problem has been found. Having the ground of any unit disconnected can potentially create a dangerous situation.

An easy way to locate a noisy component is to replicate the problem then start disconnecting components one at a time, starting with a source. Digital cable boxes and satellite receivers are notorious for making ground loop hum. This is normally caused by the potential difference on the input wire (shield side) for either of the boxes when referenced to ground. If this is the case in your system, the installation of an isolating transformer would be the easiest solution and are normally readily available at your local electronics parts store. A better solution is a power strip with grounded and surge protected F-connectors that you can pass a signal through. Where possible, use the Toslink inputs. Because of the optical transmission, there isn't any audio connection path to ground between components, and the possibility of a ground loop should disappear.

Warranty coverage

Wyred 4 Sound's warranty obligations are limited to the terms set forth below:

Wyred 4 Sound, as defined below, warrants this Wyred 4 Sound-branded hardware product against defects in materials and workmanship under normal use for a period of FIVE (5) YEARS from the date of retail purchase by the original end user purchaser ("Warranty Period"). If the product has been transferred from the original owner to a second hand owner it has a ONE (1) YEAR warranty, valid from the original date of purchase by the original owner. If a hardware defect arises and a valid claim is received within the Warranty Period, at its option, Wyred 4 Sound will either (1) repair the hardware defect at no charge, using new or refurbished replacement parts, or (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. Wyred 4 Sound may option that you replace defective parts with new or refurbished user-installable parts that Wyred 4 Sound provides in fulfillment of its warranty obligation. A replacement product or part, including a user-installable part that has been installed in accordance with instructions provided by Wyred 4 Sound, 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 Wyred 4 Sound's property. Parts provided by Wyred 4 Sound in fulfillment of its warranty obligation must be used in products for which warranty service is claimed. When a refund is given, the product for which the refund is provided must be returned to Wyred 4 Sound and becomes Wyred 4 Sound's property.

EXCLUSIONS AND LIMITATIONS

Wyred 4 Sound does not warrant that the operation of the product will be uninterrupted or error-free. Wyred 4 Sound is not responsible for damage arising from failure to follow instructions relating to the product's use. This warranty does not apply: (a) to damage caused by use with non-Wyred 4 Sound products; (b) to damage caused by accident, abuse, misuse, flood, fire, earthquake or other external causes; (c) to damage caused by operating the product outside the permitted or intended uses described by Wyred 4 Sound; (d) to damage caused by service (including upgrades and expansions) performed by anyone who is not

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a representative of Wyred 4 Sound or a Wyred 4 Sound Authorized Service Provider; (e) to a product or part that has been modified to significantly alter functionality or capability without the written permission of Wyred 4 Sound; (f) if any Wyred 4 Sound serial number has been removed or defaced.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, STATUTORY, EXPRESS OR IMPLIED. AS PERMITTED BY APPLICABLE LAW, WYRED 4 SOUND SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, AND WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS. IF WYRED 4 SOUND CANNOT LAWFULLY DISCLAIM STATUTORY OR IMPLIED WARRANTIES THEN TO THE EXTENT PERMITTED BY LAW, ALL SUCH WARRANTIES SHALL BE LIMITED IN DURATION TO THE DURATION OF THIS EXPRESS WARRANTY AND TO REPAIR OR REPLACEMENT SERVICE AS DETERMINED BY WYRED 4 SOUND IN ITS SOLE DISCRETION EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, WYRED 4 SOUND 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 LOSS OF USE; LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS); LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL; LOSS OF REPUTATION; LOSS OF, DAMAGE TO OR CORRUPTION OF DATA; OR ANY INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE HOWSOEVER CAUSED INCLUDING THE REPLACEMENT OF EQUIPMENT AND PROPERTY, ANY COSTS OF RECOVERING, PROGRAMMING, OR REPRODUCING ANY PROGRAM OR DATA STORED OR USED WITH WYRED 4 SOUND PRODUCTS AND ANY FAILURE TO MAINTAIN THE CONFIDENTIALITY OF DATA STORED ON THE PRODUCT. THE FOREGOING LIMITATION SHALL NOT APPLY TO DEATH OR PERSONAL INJURY CLAIMS. WYRED 4 SOUND DISCLAIMS ANY REPRESENTATION THAT IT WILL BE ABLE TO REPAIR ANY PRODUCT UNDER THIS WARRANTY.

Obtaining warranty service

Please access and review the resources referred to in the documentation accompanying this hardware product before requesting warranty service. If the product is still not functioning properly after making use of these resources, please contact the Wyred 4 Sound representatives or, if applicable, a Wyred 4 Sound Authorized Service Provider using the information provided in the documentation. A Wyred 4 Sound representative or Wyred 4 Sound Authorized Service Provider will help determine whether your product requires service and, if it does, will inform you how Wyred 4 Sound will provide it. Wyred 4 Sound or its Wyred 4 Sound Authorized Service Providers will provide warranty service on products that are tendered or presented for service during the Warranty Period, as permitted by law. **Wyred 4 Sound is not responsible for freight charges to our facility for warranty repairs. We will cover return freight charges (domestic only) if the unit is found to be faulty and still within the warranty coverage period. You will be responsible for delivery and return shipping and handling charges if the product cannot be serviced in the country it is in.** In accordance with applicable law, Wyred 4 Sound may require that you furnish proof of purchase details and/or comply with registration requirements before receiving warranty service. Please refer to the accompanying documentation for more details on this and other matters on obtaining warranty service.

Recovery and reinstallation of system and application software and user data are not covered under this Limited Warranty.

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Service

In the unlikely event there is a problem with your Wyred 4 Sound component, please contact your dealer, distributor, or Wyred 4 Sound to discuss the problem before you return the component to our manufacturing facilities for repair. Products shipped to the factory will be refused and returned freight collect if not accompanied by a Wyred 4 Sound Service Department issued return authorization number (RA Number). Return authorization numbers must be prominently displayed on the outside of the box and an accompanying letter describing the problem and re-listing the RA number must be inside the box to qualify for service.

To contact the Wyred 4 Sound Service Department:

TELEPHONE 805-466-9973
HOURS M/F 8:00 am to 5:00 pm PST
FAX 805-462-8962
E-MAIL support@wyred4sound.com
WEBSITE <http://www.wyred4sound.com>

If you are located in the United States use the following procedure:

1. Fill out the Service form at the following address and be sure to document all details:
<http://www.wyred4sound.com/Service.html>
2. If service is approved we will issue a Return Authorization Number (R/A number) from the Wyred 4 Sound Service Department. Be sure to confirm the current shipping address of our facility by checking our website or contacting our service department.
3. Insure and accept all liability for loss or damage to the product during shipment to the W4S facility and ensure all freight (shipping) charges are prepaid.

The product may also be hand delivered to the California facility if arrangements with the Service Department have been made in advance. Proof of purchase from an authorized Wyred 4 Sound dealer, distributor or agent will be required for warranty validation at the time of hand delivery. Use the original packaging to ensure the safe transit of the product to the factory, dealer, or distributor. Wyred 4 Sound may, at its discretion, return a product in new packaging and bill the owner for such packaging if the product received by Wyred 4 Sound was boxed in nonstandard packaging or if the original packaging was so damaged to the point it was unusable. If Wyred 4 Sound determines that new packaging is required, the owner will be notified before the product is returned. To purchase additional packaging, please contact your authorized Wyred 4 Sound dealer, distributor, or the Wyred 4 Sound Service Department for assistance.

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If you are located outside of the United States use the following procedure:

1. Contact your representative for the details regarding their service procedure. It is likely that you will need to obtain a Return Authorization Number (R/A number) and shipping address from your dealer or distributor's Service Department.
2. Insure and accept all liability for loss or damage to the product during shipment to the dealer or distributor's Service Department and ensure all freight (shipping) charges are prepaid.

If you feel your authorized dealer or distributor is either unwilling or unable to service your Wyred 4 Sound products, please contact our service department at support@wyred4sound.com or at the above contact numbers to discuss and resolve the situation.

Voltage changes to match your country's voltage and frequency requirements to your Wyred 4 Sound product are possible only at the time of purchase. The DAC series are set to a fixed voltage to match your country's requirements and may not be easily changed.

Your Wyred 4 Sound product serial number is:

Your dealer or distributor information:

Your purchase information:

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DAC-2 Specifications

Typical Distortion THD+N (20-20kHz A-weighted)	<0.006% THD+N
Frequency Response (20-20kHz)	+/- 0.075db
S/N Ratio	> 115 db
Crosstalk	> 98 db
Noise (A-weighted)	< 7uV
Noise	< 10uV
Balanced Output Level	5.2V (14.2 db)
Unbalanced Output Level	2.6V (8.2 db)
Output Impedance	100Ω
Channel Tracking	< +/- 0.50 db

For lowering the output level with the Max setting, use the following numbers for the proper level:
(Make sure min is set to 0 for proper output level)

Output type / Output voltage / Volume setting

RCA / 2.6V / 70
RCA / 2V / 68
RCA / 1V / 62

XLR / 5.2V / 70
XLR / 4V / 68
XLR / 3V / 65
XLR / 2V / 62
XLR / 1V / 56

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