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April/May 2013

A Complete Guide To Choosing An Amplifier

What You Should Know Before Buying An Amplifier,
Integrated Amplifier Or AV Receiver



The Low Down on High Rez Music Files

Understanding the Various Popular Digital Music File Formats And How You Should Store Your Files

Reviewed Inside:

- Unison Research Simply Italy Integrated Tube Amplifier
- ADL Esprit DAC and Digital Preamplifier
- Darbee Visual Presence DVP 5000 Darblet Video Enhancer

2013 Salon Son & Image Show Coverage

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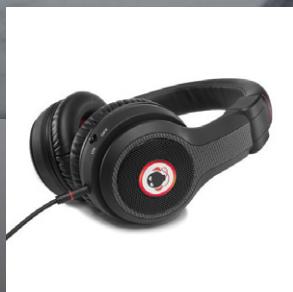


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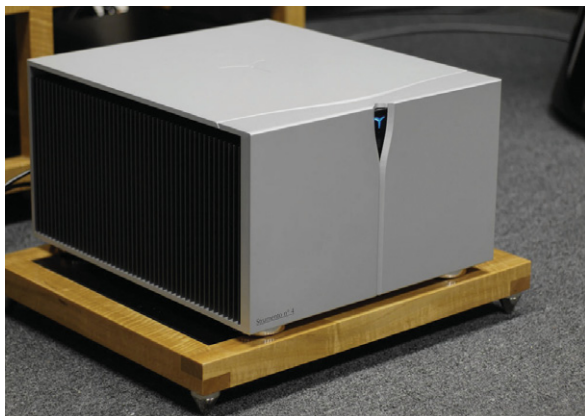
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CANADA HiFi

april/may 2013

forward >>>

The foundation of every great music or home theatre system is a high quality amplifier. In a music system that means either an integrated amplifier or a separate amplifier and preamplifier. In a typical home theatre it's usually an AV receiver, while a high-end system might be equipped with a multi-channel amplifier and a separate preamplifier/processor. The truth is that you can never have too much clean power whether you're listening to music or watching a movie. Readers often ask us all kinds of questions related to choosing an amplifier that's right for them and fits within their budget. Hence we decided to assemble our most complete amplifier buyer guide to date in this very issue. If you would like us to recommend specific brands or models after reading this guide – please ask us on the CANADA HiFi forum at www.canadahifi.com/forum. We'll be glad to answer your questions in the search for the perfect amp!

As you're flipping through the pages of this issue, you'll notice the absence of the Product News section. That's because instead we decided to provide you with an extensive coverage of the 2013 Salon Son et Image show that took place at the end of March in Montreal. If that still doesn't satisfy your thirst for upcoming products, look on www.canadahifi.com for even more SSI coverage.

The third and final feature in this issue focuses on explaining the various popular music file formats. We hope that both new and existing digital music listeners will learn something new from this article. Again, if you have any questions about this topic, Malcolm Gomes, the author of this article, will be glad to answer them for you on the CANADA HiFi forum.

Hope you enjoy this issue!

Suave Kajko
Publisher / Editor in Chief

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2013 Salon Son et Image in Montreal

Exploring the Latest Products at the Montreal Show

George de Sa and Suave Kajko

Are you a serious music buff and catch yourself playing air guitar sometimes? Do you love your movies so much that you can't resist repeating your favourite character's lines at the dinner table? If so, then you really need to make it a habit to visit a consumer electronics show that allows you to discover the latest audio video gear. The 26th edition of the Salon Son & Image (SSI) took place between March 21st and 24th in downtown Montreal. The show is one of only two shows of its kind held in Canada – the other one being TAVES, which returns this November in Toronto.

SSI was hosted once again at the Hilton Bonaventure Hotel, which is very conveniently located in downtown Montreal - a hop, skip and a jump from the Montreal Central Station. Montreal is a beautiful city with a unique personality and European-like flavour, which provides a wonderful atmosphere for the SSI. Not only can you get your fill of the latest in audio equipment and accessories at the SSI but you can also get



Audiopathways featured three rooms at this year's show. One of them demonstrated a full 5.1 channel home theatre system.

your fill of some Quebec specialties such as smoked meat sandwiches, bagels and poutine – we certainly did. As well, Montreal is a place to find live music – it permeates the city in the form of jazz, folk and rock shows that visitors can attend all night long, if they will.

The first day of the show was a

professional day, reserved for members of the industry and the media. It's a busy day of setup and final tweaks in preparation for the public opening. A traditional evening reception was held, giving the industry and media attendees some time to mingle over hors d'oeuvres and cocktails. Two Lifetime Achievement Awards were presented to a couple of very well respected industry professionals who have without-a-doubt put their heart and soul into supporting the industry and their clients. The first award went to Angie Lisi, who owns three stores/businesses in the Toronto area (Angie's Audio Corner, American Sound of Canada and Audiopathways) and has been in the business for 30+ years and; the second award went to Brian Russell, President of Bryston Limited, a man and a company that have provided incredible service to professionals and consumers. After the awards, things were given a healthy kick-start with an energetic live music performance by Hans Wilwright.



One of the other Audiopathways rooms focused on Raidho speakers and Jeff Rowland electronics.

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Our exploration of the show began with the floor that offered all the large rooms and exhibit spaces. First up was one of the three rooms presented by Audiopathways, a Canadian distributor of many high-end audio and home theatre brands. This large room contained a 5.1 channel home theatre system which consisted of Definitive Technology speakers, a NAD Master Series Blu-ray player and HT processor, a multi-channel Acurus amp, a JVC projector and of course a big screen. Every evening, visitors of the show were invited to watch a screening of the Sound City Blu-ray – a “rockumentary” directed by Dave Gohl about the legendary Sound City Studios. Unfortunately we were too busy covering the show to catch one of the showings. In addition to offering a chance to listen to the Acurus amp within the system, Audiopathways showed some of its other brands in the room in static displays, including Aragon (Acurus’ sister brand which offers an even higher level of performance) and Bel Canto. Inside the same room, there was also a 2-channel music system that visitors could listen to by RJH Audio, with owner Ron Harper on-hand to answer questions. RJH Audio demonstrated both its The Reference One and The Songbird loudspeaker models, as well as a brand new audio rack which is available in a large number of wood veneers. Last but not least, the room contained a Definitive Technology display and Saxe Brickenden, owner of the company which distributes the brand in Canada, walked me through the various products. The home theatre speakers demonstrated in this room consisted of the bi-polar BP-8080ST tower speakers and the CS-8080ST centre channel, which radiate sound both forward and to the rear, and contain dual built-in powered subwoofers. These speakers are said to offer a large sweet spot, a deep soundstage and a great bass response, without the need of a separate, dedicated subwoofer.

Also on demo inside this room were the new Definitive Technology StudioMonitor 65 bookshelf speakers connected to an Acurus amp and a variable output Bel Canto CD player. Rounding out the Definitive Technology display were a number of in-wall speakers. Brickenden said that he hopes to demonstrate the Definitive Technology speakers for the first time to visitors of the Toronto Audio Video Entertainment Show (TAVES) this November.

Audiopathways owner Angie Lisi was nice enough to explain to me what they were showing in the other two rooms, on a different floor of the hotel. One room contained the Raidho S 2.0 floor-standing speaker (\$15,000) from Denmark backed by Audia Flight electronics from Italy – the STRUMENTO N°4 stereo power amplifier (\$22,000), STRUMENTO N°1 preamplifier (\$18,000) and CD One M CD player (\$8,500). There was also another music source, a laptop computer, running through the CD player’s DAC. Everything was wired up with Transparent Audio Reference Series cables, totaling some \$25,000. I sat down for a few minutes and listened to music that offered a wonderfully balanced sound, with great high frequency details, an extended bass and an awesome soundstage. Lisi mentioned that

the next day, they would be demonstrating the VAC Phi 300.1a tube power amp (\$30,000) and the Signature Mk IIa preamp (\$18,000).

Audiopathways’ third room also utilized speakers from Raidho, this time the C 1.1 stand-mount model (\$18,000) on an equally impressive looking stand, alternated throughout the day with the D-1 bookshelf model. Most of the electronics in this 2-channel system were courtesy of Jeff Rowland, including the Model 625 power amp, Corus preamp and Aeris DAC. The source was an Esoteric P-05 SACD transport. Like inside the previous room, everything was wired up with Transparent Audio cables. Static displays also showed products from Bel Canto and Sutherland, among others.

It was nice to see Canadian distributor Erikson Consumer again at the show this year, after a few year absence, with two (small) rooms. One room focused on Arcam electronics and Mission speakers. Visitors of the first room were given a chance to listen to Arcam’s new A19 integrated amp (\$1,100), D33 DAC (\$3,300) and CD37 SACD player (\$2,500) connected to a pair of prototype Mission SX series speakers. In all, three pairs of prototype SX series speakers were shown, ranging in price from \$2,500 to \$3,500.



Erikson Consumer demonstrated the AudioXperts all-in-one lifestyle speaker solution that sits neatly underneath your TV set.

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The opposing wall of the room had an Arcam Solo Neo lifestyle music system (\$2,000) which has a built-in CD player, AM/FM tuner, network audio capability, USB inputs, along with a two channel integrated amp (50-watts/ch), fed into Mission bookshelf speakers. There was also an Arcam Solo Mini system (CD player, AM/FM tuner, iPod interface, USB inputs, 2x25 watts amp) on top of the Solo Neo. Other products on static display inside this room included three different Arcam DACs, including the irDAC (\$750), airDAC (\$750, designed for Apple AirPlay devices), rBlink DAC (\$259, designed to stream audio wirelessly from Bluetooth devices). Also on display were the Arcam AVR400 AV Receiver and the BDP300 3D Blu-ray player; and a Son-Link DAC (\$319) designed to extract better quality audio from Sonos multi-room players. Arcam produces some wonderful audio components and it would have been great to see more of them on demonstration at the show but sadly most were only shown in a static display in this small and somewhat crowded room.



Acoustic Technologies demonstrated many different brands from its large booth, some of which were available for purchase at the show.

Erikson Consumer's second room introduced a new brand distributed by the company in Canada, called AudioXperts. This lifestyle audio brand produces a product called the 4TV Audio Entertainment Console, a slim cabinet that incorporates a 5.1 speaker system and electronics and sits on top of a TV cabinet and under your flat-screen TV. There are two different mod-

els to choose from, the 4TV 2112 (\$1,999 US) and the two-piece 4TV 5122 (\$3,999 US). These consoles are ideal for anyone who wishes to add a 5.1 sound system to their TV in a compact space.

Acoustic Technologies, a Montreal based audio/video retailer and service provider, showcased numerous new products at this year's show in a large booth. Visitors of this display had a chance to listen to the Canadian-made Meitner Audio MA-1 DAC (\$6,995), the Alpha Design Labs (ADL) GT-40 DAC/preamp/headphone amp as well as the prototype ADL H118 headphones (\$295, coming this April). The music was fed by a Wyred 4 Sound Music Server 1TB, which as the name implies offers 1TB of on-board storage for music. Look out for a review of the ADL H118 headphones in CANADA HiFi when they become available. Another prototype ADL product shown at this booth was the ADL X1 portable headphone amp, alongside other existing ADL products like the GT-40 USB DAC (with phono stage), Esprit DAC/ADC (with preamp), as well as the Cruise and Stride

headphone amps. Like all ADL products, ADL cables offer the same quality as we've come to expect from the company's high-end Furatech brand but at much more affordable price

meter lengths). Another interesting device demonstrated at this booth was the Darbee DVP 5000 video enhancer (\$345) connected to a Sharp LED TV. This device is designed to improve the quality of any TV or projector picture, especially in the dark and light portions of the image. The DVP 5000 also claims to reduce the side effects of 3D sources that some viewers experience. It plugs in between your video source (or AV receiver) and your display. Check out a review of this device in the latter pages of this issue. Also on display was a simple, but very attractive, equipment rack from a brand called Solid Rack; hand-crafted in Montreal, suitable for both audio and video setups. Other brands presented at this booth included Carrot One (headphone amps) and Wyred 4 Sound DACs and music servers.

As we've come to expect from Oracle Audio, the company was demonstrating its latest audio components in a nice, spacious room. For the listening pleasure of its visitors, Oracle was demoing its flagship Delphi MK VI turntable with the company's SME V tonearm and the Corinth phono cartridge (\$22,500 for the complete package). This turntable was connected to Oracle's own Si 1000 integrated amp through a Paris phono stage. To appeal to those with a smaller budget, Oracle was also playing its Paris family of components which included a turntable (\$5,000 with arm and phono cartridge), a CD player (\$3,500) and a USB DAC (\$3,500). Regardless of the specific components playing, the sound was sent to your ears courtesy of the amazing Focal



Visitors of the Oracle Audio room were given a chance to listen to numerous new products this year.



Plurison proudly featured many of its fine brands at the show, including this display of the brand new Focal Chorus 700 series speakers.

Scala Utopia speakers. Jazz performer Anne Bisson was also featured in this room, doing some live performances from time to time and offering her albums for purchase. Jacques said that a few new products are in the pipeline and we can expect to see most of them on demo for the first time at TAVES this November.

Plurison, the Canadian distributor of many fine brands from around the planet, always does a remarkable job of representing its brands at shows. This year the company offered visitors a chance to check out its brands in one large display area, as well as other rooms scattered throughout the show. Daniel Jacques, owner of Plurison, was kind enough to give me a rundown of the latest and greatest that the company was showing this year. Cambridge Audio introduced two new pieces at the show – the Azur 752BD universal 3D Blu-ray player, which offers many audio/video improvements and features over the model it replaces, and a new entry-level Azur 351R AV receiver (\$879, the most affordable receiver from the company to date). For a taste of Cambridge Audio sound, visitors were invited to sit down in a full Cambridge Audio home theatre system, which featured the compact Minx series speakers. At the back

of this home theatre a display area featured most of the other Cambridge Audio components. Another Plurison brand called Micromega continues to add components to its My Range of affordable hifi products – this time it was the Micromega MyZic headphone amp (\$299). The other product in this series is the Micromega MyDac (\$399). In the same display area visitors could also feast their eyes on the brand new Focal Chorus 700 series speakers, the brand's attractively priced series that should appeal to many first time buyers. The new series promises many new sonic improvements and a further refined look. Al-

though these new speakers were set up in a static display here, Jacques did mention that visitors of TAVES will get to hear them this November. Just beside these speakers were Focal's compact speaker offerings including the Bird series. Two other brands - Pathos Acoustics, Crystal Cable – were also showcased in this area. A few steps down the hallway, Plurison also allowed visitors to listen to the Focal Electra 1038 Be speakers (\$12,995), driven by the Devialet D-Premier integrated amp (\$16,000) – the sound in this room was just breathtaking. Topping it all off, Plurison also presented the Naim Audio brand in a two-room suite elsewhere in the hotel. One room had an amazing sounding all Naim setup consisting of the Ovator S-800 speakers connected to various Naim components, while the other room showed a static display of Naim electronics with experts that were happy to answer everyone's questions.

The Nordost room is always a fun room to step into because the company engages its visitors like few other companies at these types of shows, thanks to the regularly run demonstrations/mini-seminars. The demo system this year consisted of Dynaudio C2 Signature speakers (\$15,000), a Simaudio Moon Evolution 750D DAC/CD player (\$13,000) and a Simaudio



Nordost always puts on some of the best demonstrations at the show.

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Moon 700i integrated amplifier (\$13,000). All cabling was from the Nordost Frey 2 line of products, with QRT power products in place. The system sounded delightfully clean and offered a remarkably large soundstage. Nordost demonstrated throughout the weekend that the system can sound even better by integrating its products into the mix.

A well-dressed Michael Manouselis of Dynaudio North America welcomed visitors into a well sized room. Here we found a gorgeous pair of Dynaudio Confidence C1 Signature bookshelf speakers (\$8,500/pair) running on an Octave V110 integrated tube amplifier (\$8,300 or \$8,900 with phono) with digital files delivered through a T+A DAC 8 (\$3,250). A pair of Dynaudio Xeo3 active wireless bookshelf speakers (\$2,300/pair) and Xeo5 floorstanding networked active speakers (\$4,500) stood proudly to the side. For those in search of a compact and low cost option, a T+A Cala integrated amplifier/streamer/tuner (\$2,200) running through T+A CS Mini speakers (\$900/pair) was setup on a table to the back, with display lights aglow. Dynaudio is the distributor for T+A and Octave products in North America.

Martensen Sound Distribution (M&M) was commanding a very large room filled with various products from the likes of Quadral, Advance Acoustic and Q Acoustics as well as the newly acquired line of Vincent Audio products. The main system could be heard from the hallway and was inviting, with a highly detailed and realistic signature. This system was a combination of Vincent Audio electronics – CD-S8 24-bit/192kHz vacuum tube disc player (\$3,800) fed into a SA-T8 tube hybrid preamplifier (\$2,800) which was controlling twin SP-T800 vacuum tube 200w/channel mono amplifiers (\$2,750/each); and playing through Quadral Aurum Titan VIII 3-way 4-driver ribbon tweeter floorstanding loudspeakers (\$24,000 to \$26,000/pair). The sound of this system was very



Top: Dynaudio showed off its Xeo speaker range at the show. Bottom: Martensen Sound Distribution had a giant room this year, showcasing many of its brands including the Aurum speakers from Quadral.

exhilarating. There were a number of new products in the room including the North American premier of Quadral Aurum electronics – A3 80 watt/channel stereo integrated amplifier (\$3,100), A5 100 watt/channel stereo integrated amplifier (\$4,300) and C3 CDP (\$2,500). From Vincent Audio, in a static display, was the new SV-237 hybrid tube integrated amplifier (\$2,500) as well as a new Advance Acoustics x160 integrated amplifier with DAC (\$700 to \$800).

This year, SSI made a serious attempt to satisfy the ever growing headphone enthusiasts, both existing and new, by providing what was called the “Personal Audio

Zone”. In one of the large rooms there were rows upon rows of tables and chairs setup, each seat having a unique set of headphones paired with it. This was an interactive setup, with all the headphones being available for visitors to see, wear, hear and taste...well maybe not taste. Though we heard the idea started small, the room ended up hosting 150+ headphones with over 15 different brand lines represented. We believe it may have been the biggest active display of its kind in North America – perhaps Guinness should have been called? What was great about the setup was that the headphones were being delivered a common music stream via

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SSI's "Personal Audio Zone" featured some 150 different pairs of headphones that visitors could listen to.

a professional hardwired distributed audio arrangement. This meant that you could move from headphone to headphone and compare the sound directly. On the front-end was a laptop playing a mix of music through iTunes. In the room, a few new headphones caught our eyes such as the new Paradigm H15 (\$199) and Furutech H118 (\$299). A few stations with dedicated CD source and headphone amplifiers could be found in one corner of the room – the headphone amplification was via SimAudio 350p or WooAudio WA7 Fireflies. The brands we saw featured – forgive us for missing a couple – were: Martin Logan, Paradigm, Logic3, Yamaha, Audio Technica, PSB, Velodyne, Sennheiser, Beats, Sony, Furutech, Grado, AKG, Shure, House of Manley and JBL. Each headphone was accompanied by an information page that provided the brand, model and price, a much appreciated touch.

Liberty Trading is a distributor of audio products, accessories and music. Its large room was filled with a multitude of CD, SACD, HDCD, XRCd and vinyl music selections. A lovely little system sat in the foyer of the room, composed of April Music's Aura Neo CD/DAC (\$1,999) and Aura Groove integrated amplifier (\$1,999), playing through Quad Classic 11L bookshelf speakers (\$750/pair) with cabling by Gutwire. The sound was nimble and inviting. Inside the room, along with all the music titles, were a plethora of accessories, such as isolation cones, record cleaning paraphernalia, cables, speaker stands and system racks. On working display

were a couple more systems that were in rotational play. The main featured system was made up of Quad Elite Series equipment, the 24bit/192kHz CDP/preamplifier (\$1,899) paired with the QSP stereo power amplifier (\$1,999) driving a gorgeous pair of Qual 25L Classic

made up of a Stello Ai500 integrated amp (with DAC) and a Stello CDA500 CDP/DAC, connected to Quad 23L Classic Signature tower speakers. For Roksan fans, there was a full Roksan Kandy system, made up of the K2 CDP (\$1,950), K2 integrated amplifier (\$1,950) and K2 TR-5 bookshelf speakers (\$1,999). This room was impossible to leave without something new in hand.

The Bryston room had already captured a healthy audience by the time we arrived. You can always count on James Tanner and Brian Russell to put together something to captivate listeners and this year was no ex-

Signature tower speakers (\$3,300/pair). Another system was a combination of April Music's Aura Vita CDP/DAC (\$399) with the Aura Vivid integrated amplifier with tuner (\$1,599) driving a pair of Quad 11L Classic Signature bookshelf speakers (\$1,095). Next to it was another system



One of the numerous systems featured inside the giant Liberty Trading room was this all Quad setup.



Bryston's Model T Signature speakers in the exotic Zebrawood finish stood tall in the company's large exhibit room. The room was filled with lots of other Bryston gear.



Goerner Communication demonstrated its Audio Physic speakers along with Grandinote electronics.

ception. There was James T. sitting at the iPad helm of the main system comprised of Bryston's BDP-2 (\$2,995) networked digital player, BDA-2 DAC (\$2,395), BP26 pre-amplifier (\$2,995) with MPS-2 (\$1,695) commanding Bryston's flagship amplifiers – twin 28B-SST2 monoblocks (\$9,600/each). The speakers were none other than Bryston's own Model T Signatures (\$7,495) a 7-driver, 3-way speaker with external passive crossover. The Model T's looked very attractive in a new exotic Zebrawood veneer finish, which by the way is a recycled product. And the sound – revealing and immediate with terrific transient response and overall ease. Dynamics, both micro and macro were riveting and the sound filled the room with fullness, richness and power. We requested some Stevie Ray Vaughan, which James graciously granted. During our conversation, James hinted at a possible new stereo preamplifier with integrated DAC that could leverage the SP3 platform – a stereo SP3 sans video and multi-channel capabilities. This could be a winner – we'll just have to wait and see. In the room was also Bryston's new Middle T, a 3-way, 4-driver, simplified version of the Model T for those with limits on their room or budget but not performance (\$4,600). A

number of other Bryston products were featured in the room including the Mini T bookshelf (\$2,550) and TC-1 centre speaker (\$2,495), as well as a BHA-1 (\$1,295) headphone amplifier setup, running with Grado headphones.

A lovely room with wonderful sound and imaging was presented by Goerner Communication, featuring brands such as Audio Physic, Acoustic Signature, Funk, Trigon, Grandinote and Creaktiv. The room had constant traffic and you had to wait your turn for a seat but it was worth it. Featured was an analog front-end made up of an Acoustic Signature Storm turntable (\$7,500) with Funk F-XR II 12" tonearm (\$3,400), VdH Colibri XGW cartridge (\$7,000) and Grandinote Celio phonostage (\$8,750), as well as a digital source in the form of the Trigon Chronolog DVD/Music Server-CD/DVD player (\$9,495). Preamplification was through a Grandinote Domino preamplifier (\$16,660), into Gandinote Demone mono-bloc amplifiers (\$49,000/pair) out through the all-new Audio Physic Virgo 25+ loudspeakers (\$18,000 to \$20,000/pair) which were debuted for the first time in Canada. The new Virgo 25+ incorporates a number of enhancements over the Virgo 25 and brings performance closer to that of the Avantara,

the next model up in Audio Physic's Reference line. All the equipment was placed on a Creaktiv Audio Line Active Plus rack (\$2,200).

Radio St. Hubert, a local dealer had a couple of rooms at SSI. The first featured Monitor Audio Gold GX 200 speakers in a premium ebony high-gloss finish (\$6,000/pair as shown, \$5,000/pair standard). The GX 200s were run on NAD equipment – the C390 Direct Digital integrated amp, with a C546 BEE CDP, using AudioQuest's new Castle Rock speaker cables (\$1,500/6ft pair). A lower cost setup with Monitor Audio RX6 speakers (\$1,599), fed by a NAD C356 BEE integrated amplifier (\$799) sourced to a AudioQuest Dragonfly (\$249) with AudioQuest Type4 speaker cable (\$270/6ft pair), was setup at the side. In Radio St. Hubert's second room there was an impressive pair of the new Totem Forest Signature speakers (\$6,000/pair) in a high-gloss mahogany finish run on a Sugden Masterclass integrated amplifier (\$7,200) with the new Sugden Masterclass PDT4 CDP (\$5,800). A set of Totem Rainmaker's in cherry wood finish were set on static display atop an ingenious looking pair of stands, by Ardan, simply called "the stand" (\$600/pair). The low-cost system in this room was made up of a pair of Totem Aero speakers (\$1,800/pair) in black with Creek Evolution 2 CDP (\$1,200) and the first Canadian showing of the new Creek Evolution 50A integrated amplifier (\$1,300).

That's it for this year, in print anyway. We hope that this gave you a good sampling of what this year's Salon Son et Image was all about. If you'd like to learn about some of the other exhibitors and what they showcased this year, please check out the Features section of www.canadahifi.com – look under "Audio Video Show Coverage". If you enjoyed reading this feature, do yourself a favour and pay a visit to the show next year. – we guarantee that you'll enjoy yourself.

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A Complete Guide To Choosing An Amplifier

What You Should Know Before Buying An Amplifier, Integrated Amplifier Or AV Receiver



Phil Gold

The integrated amplifier or AV receiver is the heart of your stereo or home theatre system and also its control centre. It accepts inputs from a range of sources – computers, CD players, Blu-ray players, turntables, tuners, smart phones, tablets and DACs. It lets you choose which source to listen to. It amplifies that signal and feeds it to your speakers or possibly your headphones. It may even allow you to adjust the sound through bass and treble controls or a loudness contour. In most cases it will also come with a remote control so you don't have to get up from your chair. Well that's the job description. Are all amplifiers equally good at all these tasks?

You can't tell everything from the spec sheets, but you can learn quite a lot. Sometimes it's what isn't shown in a spec sheet that can be the most revealing. Maybe there's something to hide. In my day job I get a lot of applications from new graduates. Those with good transcripts usually attach them to their application. Those with poor marks will usually omit them.

It may surprise you to know that the difference between two amplifiers may be quite small on one set of speakers, but very significant with another pair. An amp

can do well with one source, say CD, but perform poorly with another source, say vinyl. Let's take a closer look at the spec sheets.

Tubes or Transistors

There are lots of very strongly held opinions in this field, just as in the analog / digital divide. In fact there are excellent valve amps and excellent tube amps, just as there are mediocre ones of both types. But the vast majority of amps are fully transistor based, since tube amps are often considered temperamental and high maintenance. Silicon amps usually achieve high reliability and can be left on at all times, whereas tube amps are often less efficient and tubes have a finite lifespan. Tubes can also go microphonic (a mechanical vibration), may need periodic bias adjustments and tube amps often have a higher level of hiss and hum than transistor amps. But many enthusiasts love the distinctive tube sound which encompasses a warm and present midrange and excels at both imaging and tonal quality. Owners of tube amps can re-tube their amps with higher quality tubes than the manufacturer supplies, thereby tweaking the sound to their own preferences. Look for talk about NOS

(new old stock) tubes from Telefunken, GE, RCA, Westinghouse, etc. Transistors are often preferred for their wide bandwidth and low background noise.

In this article I will focus on transistor amps, but if you want more information about tube amps I can point you to the article "Tube Magic" by my colleague Malcolm J. Gomes in the 2012 Aug/Sept edition of CANADA HiFi.

sidebar



Hybrid Amplifiers

Some manufacturers (such as Rogue Audio, Blue Circle Audio and Patmos Acoustics) offer a hybrid approach, whereby the preamp stage is tube based and the power amp stage is silicon based, which they claim gives you the best of both worlds.

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– Dale Rasco, HomeTheater Shack



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Integrated Amps or Receivers

An integrated amp is traditionally a two channel affair dedicated to the audio side of the equation. So it will have two channels of amplification, which will usually share a common power supply. A fine example is the Arcam FMJ A19. Some amps, like the NAD M3 have a dedicated power supply for each channel, and these are often described as dual-mono. This is an expensive feature, but allows each channel to operate more independently of the other, reducing cross-talk and improving fidelity.



A stereo receiver will add a tuner section to the mix. This used to be a very popular type of amplifier but is less commonly seen today in high quality components. Canada's own Magnum Dynalab is one of the few companies offering a high end stereo receiver, the MD 209 Hybrid Audio Receiver.

An AV Receiver will allow you to play stereo or multichannel audio and will also be set up to support subwoofers and video switching. Don't expect the same kind of audio fidelity you will find in dedicated stereo amplifiers unless you are willing to pay a lot of money. When you have to provide 5, 7 or more channels of amplification, that puts a lot of strain on the power supplies and many of these units are mass produced and designed to hit particular price points. But once again there are exceptions. Anthem, Krell and Bryston are among the companies who have not compromised quality when moving from 2 channel to multi channel, but they offer separate AV Preamps and Power amps

rather than Integrated receivers. Marantz now offers its SR6007 Receiver supporting the new 4K video format and is a strong performer.

Rated Power

Amps are usually specified in terms of watts per channel (wpc). But you need to look closer. Is that at one frequency (say 1kHz) or across the full bandwidth (say 20 – 20,000 Hz)? And is that driving an 8 ohm loudspeaker or 4 ohms? An amp will usually offer more power into lower impedances and a perfect amp will double the wpc measure each time you halve the impedance of the load. Most real world amps can't do this – they can run into trouble when the speaker's impedance drops. Sadly, you can't rely on the single published

impedance number for each speaker either, since the impedance will often vary widely with the frequency of the sound. You may see a speaker spec that says Nominal Impedance 8 Ohms, Minimum impedance 5 Ohms (30 – 30,000 Hz), and this is far more helpful. The only real way to tell is to try the amp with the speakers, but be aware that as you move up the price curve, the ability to drive difficult speakers (inefficient speakers with low impedance somewhere in the spectrum) will often improve considerably, and this is a major reason to cough up the extra money. You have to consider the two components together. An amp with high output is not just good for playing music at high levels, it is equally important in allowing the sudden dynamic



peaks in acoustic music to pass without compression or distortion. This is less of a factor in pop music, which is often compressed during the mastering process, and more of a problem in classical music where such practices are less common. The Simaudio Moon 600i is a first class integrated stereo amp which doubles its maximum output from 8 ohms (125wpc) to 4 ohms (250 wpc).

Damping Factor

This measures the degree of control an amplifier has over a speaker, and is most significant in the lower octaves. Again, some speakers are easy to control and will work well with almost any amp within their decibel range. Others require support from the amp to control reverberations near the resonant frequency of the speaker after a tone is played. Solid state amps often score higher here than tube amps. The higher the number the stronger the grip. A score of 50 or higher indicates that the output impedance of the amplifier (which again varies with frequency) is low compared to the internal resistance of the speaker and the speaker cable. The Simaudio Moon 600i scores over 267.



Distortion

There are multiple measures of distortion and most modern amps measure very well, but the reading is often less important than the type. Even order distortion, common in most tube circuits, may actually add warmth to the sound, while odd order dis-



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tortion can sound harsh. Distortion may vary with output and frequency. Some of the best sounding amps do not measure all that well so I would not pay much attention to this spec. The reason is that by applying larger amounts of feedback in a circuit, you can reduce the measured harmonic distortion level, but you introduce all sorts of other problems at the same time. Some amps, in particular the class of low power tube amps known as Single Ended Triode (SET) amps are loved by many for their warm rich and dynamic sound with very efficient speakers, but can measure hundreds of times worse than conventional amps. The above mentioned Simaudio Moon 600i measures at less than .015% at 1 watt from 20 Hz to 20 kHz, and less than .04% at its maximum rated output across the audio band, which is excellent.

Amplifier Class

The best amps generally belong to Class A in which the amplifying device operates over the entire input cycle. You will often find this type of amplification in low level amplifying stages – say in the preamplifier or in the output stage of a CD Player or DAC. But Class A is not often seen in the power amplification stage, especially in high power amps, because it is very inefficient and throws off large amounts of heat. You'll see it in very expensive amps, or in some low power amps, but you'll also see relatively large power supplies and massive casing designed to dissipate the heat generated. Price per watt can be very high.

In Class B operation, each amplifying device deals with just half of the waveform, and the devices are used in pairs (push-pull). This is much more efficient, but it also leads to higher distortion, especially in the crossover region between the two halves of the wave form. The ear is particularly sensitive to this type of distortion. In practice, the most common form of amplification combines Class A and Class B together, so that at low output the device may operate entirely in Class A, but when the output level increases it will switch to a class B operation. The better the amp, the higher the switching threshold. A fine Class AB amp may put out 8 or 10 watts in Class A before gradually switching over.



Pass Labs offers both options. Its INT-30A offers 30 glorious watts of Class A output, while in the same chassis, the INT-150 is a 150 watt Class AB amp. Apart from the power output, both amps offer identical specifications, and both are truly excellent examples of their type.

Many amps today run in Class D, which is often mistaken for Digital amplification. It is still an analog amp but it uses a high speed switching mechanism instead of the linear amplification of Class A, B or AB and achieves very high efficiency. Opinion is divided as to whether Class D amps can achieve the sound quality of a good Class AB amp, let alone a Class A amp, but because they are so efficient, power supplies can be much smaller, heat dissipation requirements are low and therefore it is much cheaper to implement and can be expected to take an increasing proportion of the market. Bass reproduction is much praised but considerable criticism has been made of the higher frequencies of some popular Class D modules. The

latest generation of Class D amps is much more competitive than the earlier components. Class D is especially popular in multichannel amps since a good Class AB amp would be much larger and heavier. The Pioneer Elite SC-68 THX Ultra 2 Plus 9-channel receiver is a great example.



Tone Controls

You'll find more tone controls on inexpensive amps than on high end amps. The prevailing view is that the less you mess with a signal, the less damage you do to it. If you really want to adjust the frequency response, buy yourself a high quality parametric equalizer. It costs good money to implement tone controls without compromising quality, but some manufacturers have done so, notably those from Japan. Take a look at the Accuphase E-260. Look for the ability to bypass the tone controls when you don't need them, or do as I do and avoid amps with tone controls altogether. You really only need them if there's something wrong elsewhere in the system – better to spend your money fixing that problem.



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What makes a good amp tick?

The things that make a good amp outshine its competitors are to be found less in the spec sheet and more in the quality of the internal components and how well they are laid out and assembled. Of prime importance are the power supply and the volume control, while the wiring, connectors and chassis each play an important part. The power supply is key to it all. Better components will have separate regulated supplies for each section of the amplifier, and the best will have independent supplies for each channel. The quality, type, number and rating of the capacitors is all important here. The volume control may be a simple pot, a DAC based design or an expensive stepped attenuator with individual resistors for each level. While no one can tell how good an amp sounds just from the spec sheet, it is possible to rule some amps out as underpowered or underdamped or too high in distortion or too narrow in bandwidth.

So you really need to find a reputable dealer to give you advice, and you need to trust your own ears. Ideally you will have the opportunity to listen in your own home with your own

speakers. If that is not possible, then listen in store using speakers of similar efficiency and impedance to the ones you have at home. Listen to music that really tests the equipment. That means unamplified piano and fine recordings of the human voice. For really low bass, try some Bach organ music even if you will never listen to it again, but also try something like the Holly Cole Trio. No store will thank you for maxing out the volume to test output levels, but if the amp meets the speaker manufacturer's recommended power output you've got little reason to worry on that score – your speakers will wimp out before the amp does. Another really good test is to listen to an amp at lower than the usual volume settings. If it still retains its musicality, that's a very good sign. Too often the sound becomes lifeless and uninvolved at low decibels.

Having eliminated any amp that fails these tests, it's time to bring out your favourite recordings or videos and put them through their paces. Remember also that an amp takes time to sound its best. It may need 100 or more hours of use to burn in, and it should be on for half an hour or more to get to its optimal working temperature.

Balanced or Unbalanced

Some more expensive amps offer a choice of balanced (DIN) or unbalanced (RCA) inputs. True balanced operation is expensive, since it requires a doubling of most of the components within the amp and special balanced cables from your source components. Some amps will offer one balanced input but in many cases this input is then converted to an unbalanced signal before amplification, so the benefits are just not there. True balanced operation is designed to reduce noise and increase the voltage swing but you should not look for this unless you are really aiming for the top, in which case you will probably prefer a separate preamp and power amp anyway. Ayre Acoustics makes a highly recommended and relatively affordable fully balanced amp, the AX-7e.

Digital Inputs

Many amplifiers coming onto the market today have one or more digital input, often a USB input and sometimes even a wireless input. The Naim UnitiQute receiver is a splendid example with two wired digital inputs and a streaming wireless receiver. Digital inputs may save you from needing an outboard DAC and can be expected to be increasingly popular over time.

Phono Inputs

Do you have a turntable or are you planning to get one? A number of amps and receivers now have a phono input so you don't need to get a separate



phono preamp. The Luxman L-505u integrated stereo amp offers 100 wpc and has a phono input switchable between moving coil and moving magnet cartridges. It also has two sets of speaker outputs: A, B or A and B.

Headphone Output

This is a feature I would look for but it is often implemented on the cheap. Try it out by bringing along or asking your dealer to provide some really difficult to drive phones like the Sennheiser HD800. Then try using something extremely efficient like the phones you use with your smart phone. Make sure the range of volume adjustment is adequate for both types of phones, and make sure the sound is not too bright and that background hiss and hum are undetectable. The Creek Audio Destiny 2 is an excellent example of the breed.

AV Receiver Buyer Guide

If you're in the market for a 2-channel integrated amp, you can now go out and audition some amplifiers to determine which brand and model suits your particular music taste. However if you're looking to purchase an AV receiver, you should definitely also read our AV Receiver Buyer Guide in the "Buyer Guides" section of www.canadahifi.com – there are a lot of additional factors to consider before buying an AV receiver. Either way, happy listening!



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The Low Down on High Rez Music Files

Understanding the Various Popular Digital Music File Formats

And How You Should Store Your Files



Malcolm J. Gomes

It is rare in the world of marketing to find an instance where the lowest quality item is, by far, the most popular and dominant product in its category. Yet this is exactly what we find in the sphere of music files where the MP3 format is so dominant, it accounts for more of the market than all the other file formats combined!

In fact if you were to ask teen music lovers about music files, they are quite likely to be totally unaware of any other format besides MP3. So what accounts for the total dominance of MP3 in the world of music? Before we get into that, let us try to understand what MP3 is all about. The name is the short form of MPEG (Moving Picture Experts Group) Audio Layer III.

It is a system that helps compress the music signal so that it can be downloaded in a fraction of the time that an uncompressed file would need. An MP3 file occupies about 10% of the space on a hard drive as compared to an uncompressed

music file. This compression is done by discarding portions of the music that we supposedly do not hear, but in reality, can easily be heard by anyone with normal hearing, listening to the music file being played on any decent audio system.

When they were first developed, highly compressed music files like MP3s offered a huge advantage because they enabled a much faster download time and also because drives that stored the bits and bytes that encoded digital music were very expensive. Therefore a format that allowed us to store 10 times more music on our portable digital music player was obviously going to be very popular.

The MP3 system was also helped by the fact that most listening to these portable digital music players is done through headphones that are not exactly of the highest quality. This meant that it did not matter all that much that MP3 music files had sound quality that is quite mediocre

compared to their uncompressed counterparts.

The fact that Apple's iTunes juggernaut made MP3 their "go to" format for music downloads helped a great deal ensuring that all the stars were aligned to make MP3 the king of the hill. This dominance is still so overwhelming, even though ever more sources offer an ever growing choice of higher resolution music file formats and the price of HDDs and SSDs are dropping faster than a teenager can leaf through his first issue of Playboy, it is very unlikely that any of the higher resolution formats will make even a chink in the MP3's armour.

The closest format to MP3 is AAC, which is an acronym for Advanced Audio Coding. AAC is a smidgen more efficient than MP3 in compressing the music file and so is faster to download and takes up even less space than an equivalent MP3 file, while delivering the same audio qual-

ity as its counterpart MP3. A 128 kbps AAC music file would deliver approximately the same quality as the same music encoded in a 160 kbps MP3 file. AAC also has the backing of Apple and so gained in popularity by being offered through iTunes.

Formats like MP3 and AAC, where there is a great deal of compression, are categorized as ‘lossy’ music files. The next step up are ‘lossless’ files where the original file is compressed but with little to no-loss in sound quality and the third category is the uncompressed file where the information is a bit-for-bit copy of what you find on a compact disc.

Apple gave a nod to the drawbacks of the MP3 and AAC formats when it created a higher resolution lossless format called the Apple Lossless Audio Codec or ALAC, which took up just half the space of an uncompressed music file while retaining most (some claim all) of the fidelity of the uncompressed file. With the introduction of ALAC, Apple ensured that its customers with a penchant to upgrade their audio equipment would have music worthy of better quality audio gear.

The most popular lossless format today is Free Lossless Audio Codec or FLAC. This format uses an algorithm that typically compresses the original file to around half its original size in a way that after it is decompressed, it is in theory, an identical copy of the original data. The attraction of FLAC and the reason for its surging popularity in the lossless sphere is that it is an open format that can be licensed without paying any royalties and best of all, it is free to the public at large. The icing on the cake is that FLAC discourages the much hated copy prevention DRM system. FLAC also supports metadata tagging and album cover art. The downsides to FLAC are that it cannot store floating-point data and it is not compatible with all portable audio players like the MP3.

Josh Coalson started the development of FLAC in the year 2000. It entered its beta stage as version 0.5 in January 2001. The regular version made its debut in July 2001 as version 1.0. It has since evolved and improved by leaps and bounds to become the world’s favourite lossless audio file compression system.

FLAC is very versatile, in that, it can handle any PCM bit resolution from 4 to

32 bits per sample and any sampling rate from 1 Hz to 655,355 Hz in 1 Hz increments. It is also capable of handling 1 to 8 channels, which makes it an ideal system for use in 5.1 or 7.1 home theatre configurations.

The modus operandi that FLAC uses is to convert the audio samples into a series of small uncorrelated numbers which are known as residuals. These are stored very efficiently using Golumb-Rice coding. FLAC utilizes run-length encoding for blocks of identical samples like silent passages in the music. The significant advantage that FLAC enjoys over other lossless formats is its ability to be streamed and decoded very fast and totally independent of compression levels.

Given all these advantages, FLAC has become the “go-to” format for serious music listeners to store their music CD collection in. When you transfer your CDs to the FLAC format on your hard drive, you have a copy of all your music that is, in theory, an exact duplicate of the original data. This is more than you can do with music stored in lossy formats like MP3 and AAC.

If you use FLAC to rip your CDs you can use the optional CUE file. The advantage of this option is that the CUE file will allow you to burn an audio CD that is identical in audio data to the original CD that you ripped. This includes the order of the tracks, the gaps between each track and the CD text. The CUE feature is not capable of copying other information that may be embedded in the original CD like lyrics and CD+G graphics. Given all these great features, it is no wonder that a lot of audiophiles say that once you go FLAC you never go back!

Having covered lossy and lossless formats, let us now move on to the grand daddies of digital music files which are WAV, AIFF and DSD. These are the most popular uncompressed formats and represent the best way to store digital music. The downside of these formats is that they make for giant sized music files and so they take forever to download and also gobble up a huge chunk of your HDD or SSD capacity, typically around 10 MB for each minute of music.

WAV is the short form for Waveform Audio File Format and is compatible with Windows, Macintosh and Linux operat-

ing systems. The name WAV caught on because that is the file name extension for this type of file. It was developed by Microsoft and IBM for storing audio bitstreams on PCs and is an application of the Resource Interchange File Format or RIFF, which stores data in chunks. It is the main format used on Windows based systems for storing raw and typically uncompressed digital audio information. The bitstream encoding employed is Linear Pulse-Code Modulation or LPCM format.

A WAV file can hold both compressed and uncompressed audio but it is the latter that is more prevalent. The downsides to WAV include format inconsistencies like the 8-bit data being signed while 16-bit data is unsigned. It is also not a very efficient format where you find many chunks of data being duplicated in other chunks. Since it is derived from RIFF, a WAV file can be tagged with metadata in the INFO chunk and it can also embed Extensible Metadata Platform (XMP) data.

The relatively large size of WAV music files makes them unwieldy for sharing on the Internet but because it can be bit-for-bit identical to the original in terms of data stored, it is a popular option for retaining first generation archived files for use on a system where disk space is not a constraint. It is also extensively used in audio editing in cases where time involved in compressing and decompressing data is a factor.

The relatively high popularity of the WAV format could be attributed to the fact that it has a simple structure, which makes it a good fit across a wide variety of software applications as the lowest common denominator for exchanging sound files among various programs. WAV is also very versatile in that it can be converted to almost any other popular format. Unlike FLAC, WAV files don’t usually have fields to store song titles, artist, year of recording, name of album and other such song related information.

Even though both audio CDs and WAV files have PCM encoded audio data, CDs use the Red Book Audio format instead of WAV. Since a WAV data file format is meant for a computer to use, a CD player cannot decipher it directly. If you want to record WAV files to an audio CD in a way that can be read by a CD player, you need to strip the file headers and then write the



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remaining PCM data directly to the disc as individual tracks with zero padding added so that it matches the CD's sector size. With most CD burners, the WAV file needs to be burned to a disc in the 44,100 Hz, 16-bit stereo format.

The Apple equivalent of the WAV file is called Audio Interchange File Format or AIFF. Like WAV, it is an uncompressed audio format but uses a different modulus operand to create the file. Like WAV, an AIFF file is compatible with Windows, Macintosh and Linux operating systems.

One format that is being used by the SACD system and has been in the wings of high rez digital downloads for quite some time now and which some in the industry expect to make some meaningful inroads into the audiophile world is the Direct Stream Digital or DSD format.

The DSD format has a sampling rate of 2.8224 MHz and uses noise-shaping techniques to push 1-bit quantization noise up to ultrasonic frequencies, which are much higher than the human audible frequency spectrum. This gives DSD a better dynamic range (120 dB) and frequency response than the CD format.

The DSD signal is created by taking a 1-bit delta-sigma analog to digital converter and removing the decimator, which converts the 1-bit bitstream into multibit PCM. The 1-bit signal is recorded directly and in theory only requires a low pass filter to reconstruct the original analog waveform.

The nature of sigma-delta converters prevents a direct comparison between DSD and PCM. However, DSD could be said to be approximately equal to a PCM format with a 20-bit depth and a sampling frequency of 96 kHz. The highest form of DSD is double DSD, which samples at 5.6 MHz, which is double the SACD rate. This version is also referred to as DSD128 because its sample rate is 128 times that of the CD system.

At the moment there are very few sites that offer DSD downloads and their offerings are limited. There are also only a handful of DAC manufacturers, including Mytek and Benchmark, which offer models that can handle DSD. However, given the fact that DSD and double DSD are formats that are capable of sublime performance, it will not surprise me if their popularity grows exponentially in the fu-



Once your music is stored in the digital format, you might as well introduce a digital player to your music setup. Top: Sonos offers a very popular and affordable line of digital players that can stream music via a wired or wireless connection from computers around your house to multiple rooms. Sonos players however do not offer support of high resolution files. Bottom: Bryston's BDP-2 digital player on the other plays high resolution files but is not designed for a multi-room setup. Both players can be controlled with smart phones and tablets. To learn more about digital players and music servers, check out our two-part "Bits & Bytes" article in the Audio Features section on www.canadahifi.com.

ture.

The other popular music file formats include Windows Media Audio or WMA and OGG Vorbis. The former is a Microsoft proprietary audio format that is similar to MP3 but with just a fraction of MP3 support from applications and devices. Besides the formats mentioned in this article, there are a host of other formats, which are either niche players or have not really caught on in a big way.

If you are a music enthusiast with HDD or SSD disc capacity to spare and if you want to play it safe, the WAV format is probably a good option to store all your CDs. If disc space is a limitation but sound

quality is important to you then FLAC would be your best option.

Since the prices of high capacity multi-terabyte HDDs are now so affordable and considering that sub-one thousand dollar digital to analog converters now offer better performance than all but the best CD players, it is time to either dump your CD player or relegate it to a standby component and delve wholeheartedly into the world of computer audio. This move makes sense not just because it is a lot more convenient but also because it can deliver great performance at a very down to earth price.

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ADL Esprit DAC and Digital Preamplifier

George de Sa

Furutech is an audio-video product manufacturing company that is based out of Tokyo, Japan. The company was founded in 1988 and produces audio-video cables, OEM parts and accessories for both home and car audio. Alpha Design Labs (ADL) is Furutech's entry-level line, aimed at producing innovative products that are also affordable to a broader set of consumers. Within the ADL stable there are four different product lines: Headphones; Headphone Amplifiers; USB-DACs and; cables. The new Esprit DAC and ADC digital preamplifier falls within the ADL USB-DAC line of products.

I received the Esprit (\$899) from AuDI-Yo Inc., the Canadian distributor for Furutech products and DIY (do-it-yourself) parts and products. Simon Au of AuDIYo Inc. was kind enough to also provide a few samples of ADL's cable products to be used with the Esprit; these were the Formula 2 USB cable (1.2 metre: \$75) and the Alpha Line 2 Interconnect (1 metre: \$185). In addition, I was very excited to receive a prototype of ADL's first-ever headphone model - the ADL H118. It's always nice to get new products in but it is a real privilege to get an opportunity to try out a near-production ready prototype. The production version of this new ADL H118 headphone from Furutech is expected to be out by mid April, with a MSRP of \$299 – stay tuned to CANADA HiFi for a review in the near future.

design features

The Esprit is intended to raise the performance bar on ADL's current GT40, which



was reviewed in the Dec/Jan 2010/2011 issue of CANADA HiFi. To quote Furutech: "The GT40 was the stripped-down sports racer of the group and the Esprit is a faster, more luxurious GT model." The Esprit incorporates higher quality parts, offers increased capabilities and a slightly different feature set than the GT40. There is no denying that the Esprit is a feature-rich product, providing DAC (digital-to-analog conversion) and ADC (analog-to-digital conversion) capabilities along with the ability to serve as a stand-alone active preamplifier and/or headphone amplifier. There are three digital inputs (USB and S/PDIF via optical and coaxial) plus two pairs of RCA analog inputs (line 1 and 2). The output is provided via a pair of analog RCA jacks or via digital S/PDIF optical out, as well as through the single USB jack (the S/PDIF optical out only functions with USB sources and supports multi-channel formats like AC3/DTS). Those familiar with the current GT40 will note that the Esprit lacks an integrated phonostage. Yes, the Esprit drops the on-board phonostage but in turn gains the added flexibility of being a full-function preamplifier. This means that by simply adding a pair of active monitors the Esprit

can serve as the main hub of a computer based audio setup. The Esprit also sports a front 6.3mm headphone jack, making it a headphone amplifier but a clear step up in performance over the GT40 with higher output power and the ability to drive a broader spectrum of headphones - anywhere between 16 and 600 ohms.

Getting a little more technical - the DAC within the Esprit is a 24-bit/192kHz Wolfson WM8716 chip and ADC operation is via a 24-bit/192kHz Circuits Logic CS5361 chip. Though playback is possible up to these resolutions via S/PDIF, both USB playback and recording are limited to 24-bit/96kHz. Worth noting is that on the back of the Esprit there is a mini-switch to optimize performance of the digital S/PDIF inputs for input sampling rates; there are two positions 96kHz or 192kHz. THD for digital inputs is < 0.05% and < 0.01% for analog line inputs. The frequency response is stated to be 20Hz to 20KHz (+/- 0.5dB), with a signal-to-noise ratio of -95dB. Maximum line output of the preamplifier section is 7.5 Vrms at < 1% THD, which gives it enough line output to control just about any power amplifier. On the headphone side, the specified output levels are: 156mW (16ohm),



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224mW (32ohm), 241mW (56ohm), 130mW (300ohm), 76mW (600ohm) – all quoted at 1 kHz/1% THD with a > 120dB dynamic range.

The Esprit is quite compact, having dimensions of 150mm (W) x 141mm (D) X 57mm (H). Weight comes in at a respectable 900g. Though not exotic in appearance, the Esprit has a look of quality, taking on a more professional and purposeful image. It is available in any colour you like - as long as that's black. The front faceplate and body design is sturdy but doesn't cross over into extravagance. Wrapping my knuckles on the body demonstrated a sturdy build with no flex or rattles. Fit and finish is commendable and all switches and knobs are both robust and precise in feel - the attenuator is top notch. The backside of the Esprit reveals some serious bling in terms of RCA sockets - no worry here with using the tightest fitting interconnects. Overall, the Esprit imbues a feeling of confidence with just one small caveat; the apparently run-of-the-mill wall-wart power supply. However, it turns out that there is more here than meets the eye, as this power supply was specifically chosen for the Esprit and provides higher output and performance than the one supplied with the GT40. In fact, the Esprit has dual external power supplies: 1) a 5V DC supply from a bus-powered USB chip for optical output only and; 2) the DC 15V / 800mA / 12W AC/DC switching plug-type adapter for high resolution audio.

performance

I began using the Esprit as a headphone amplifier, pairing it with my Focal Spirit One headphones (reviewed in the Feb/Mar 2013 issue) as well as the prototype ADL H118 headphones. In addition, since I have a pair of Shure SE535 IEM's in for review, I tried them out with the Esprit, as well. The first aspect of the Esprit that caught my attention was its utter silence – it was so quiet, whether connected to my computer or in my main system. The result of this silence was that it was much easier to listen into the details – as if the instruments and voices were against a black backdrop. Even when using the Shure IEM with its low 16 ohm impedance that can present a challenge for headphone amplifiers - there was no de-

tectable noise up to even half on the volume pot; a position never reached in practice, as the Esprit drove them admirably at just a 1/4 way up on the dial. Speaking further about power – the 32 ohm / 104 dB sensitivity Focal Spirit One's ran well enough at 3/8 position on the attenuator, while the 68 ohm / 98 dB sensitivity ADL H118 headphones needed no more than 1/2 way up on the volume, when fed by Squeezebox Touch in my main system. With my computer-based setup, even lower positions were required on the Esprit to adequately drive these headphones. With most headphones – the Esprit will have power to spare.

As a headphone amplifier, another characteristic that was evident in the Esprit was its smoothness, combined with a measure of sweetness in the treble. The mid-range had complexity and fullness, neither too full nor too thin. Bass was full and dynamic with good speed but I did notice that the Esprit gave up just a bit in bass punch and slam, made more evident on a couple of Metric's albums - *Grow Up & Blow Away* and *Live it Out*. Music with the Esprit favoured liquidity over incisiveness and therefore, the Esprit never sounded dry or harsh, with detail delivered in a natural manner. I'd also say that the Esprit surrendered just a little in edge definition to deliver a consistently pleasant and non-fatiguing presentation. The soundstage through the Esprit had nice depth and breadth with layering clearly perceptible, making for pleasurable and engaged listening. Using the prototype ADL H118 and listening to Esperanza Spalding's track *Short & Sweet* from her album *Chamber Music Society*, piano notes carried a sweet delicacy and glow. The light tapping of drumsticks could be heard faintly at the beginning of this track. The opening violin was delivered authentically, revealing the natural resonance of the panels and the textured sound of the bow drawing across the stings. Esperanza's voice was smooth with a lovely feminine pitch. In the lower regions, the bass was quite impressive in its fullness while still exposing the articulation of the stings. The tapping of the cymbal had a lovely crispness and metallic lustre. Next I tried my Focal Spirit One headphones with this track and though the inherent smoothness of the Esprit was still evident – the Focal

provided me with a slightly different result than the ADL H118. The Focal Spirit One was a little less revealing with a more recessed midrange but still smooth and sweet. The Spirit One demonstrated that the Esprit could provide wonderful control and extension in bass frequencies. I also tried the Shure SE535 IEM and was pleased to get incredible detail retrieval through the Esprit, delivered in a natural and refined manner. As a headphone amplifier, the Esprit provided impressive results.

Next I used the Esprit as a DAC in my main system, fed by my Squeezebox Touch into my Bryston BP6 / 4B-SST2 combo and then out to my Audio Physic Sitara 25 loudspeakers, all tied together with Kimber Kable loom. I've been listening quite a bit to Anne Bisson, an up-and-coming Canadian artist, and since I've been appreciating her album *Blue Mind* in hi-res FLAC 24/96, I decided to put it to good use. The first track is beautiful, yet simple, with just a sole piano and Anne's graceful voice. The Esprit brought forth Anne's vocals with clarity and detail – the texture, intonations and expressions of her voice intact; her breaths lifelike against a black background. The piano's notes and reverberation laid out the boundaries of the soundstage. It came across with rich tonal colour, while the key strokes were portrayed with both delicacy and believable weight and dynamics. Moving to the title track *Blue Mind*, the thump of the bass drum grounded the song. The bass had body and good depth with string plucks apparent but just a bit softened. A snare drum took its place at the back of the soundstage, just behind the front wall of my room. The ride cymbal shimmer was feathered and light, while a couple of sharper cymbal strikes demonstrated a lively nature. Switching over to my reference Musical Fidelity M1-DAC, what I received was a more relaxed rendition of this track with a noticeably larger soundstage both in width and depth. The bass drum was softer in the mix and less extended and tonal colours were not as vibrant; however, the presentation was more ethereal, having a softer touch and giving the impression of a larger space with my speakers vanishing more effectively.

Continuing with the Esprit as a DAC in my main system I put on the Esper-

anza Spalding track *Short & Sweet* that I mentioned earlier – listening to it both in ALAC 16/44.1 and in hi-res FLAC 24/96. The bass was warm and full – plucking of the strings carried their intrinsic rasp and squeak. The tap of a drum across the soundstage carried both size and weight. The recording was presented in an intimate manner with the rear of the soundstage aligned with the front wall of my listening room, just about three feet behind the speakers. Cymbal strikes were clean and pure with realistic brightness but having a gentle smoothness. The piano keys were depicted with warmth and sparkle. Esperanza's voice was projected as both smooth and sweet and with lifelike dimension. In comparison, my M1-DAC provided more air with a larger soundstage – the bass now sitting out farther past the front wall. The sense of the recording space increased. Skin resonance on drum strikes had more sustain and the brushes on the drums were more crisp and lifelike. Drums were more gong-like given the greater sustain but having a little less impact and weight than with the Esprit. On piano keys the M1-DAC had a lighter touch but preserved more glow and sustain. I was left with the impression that the Esprit as a DAC serves to provide a smooth, tonally rich and natural outcome with wonderful bass extension that overall is more intimate – a more in-the-room than beyond-the-room presentation. Focus is given to the instruments and voices with less air and room ambience retrieval. Performance elements tend to take their place closer to the listener. Sonics are immediate and palpable with less focus on sustain, and are liquid with no dryness or etch.

Using the Esprit as a stand-alone preamplifier, direct into my 4B-SST2 amplifier, I found that resolution of detail was noticeably increased over my reference setup that utilizes my Bryston BP6 preamp between my DAC and amplifier. The elimination of the additional preamplifier and interconnects allowed the Esprit to tap into yet another level of micro detail. That said, what I was more surprised to find was that the direct connection of the Esprit to my amplifier resulted in a smaller soundstage, with some of the ambient cues and air now missing – the background was blacker but gone was the larger perceived

space. How could this be? My guess is that it might be something to do with greater synergy between my Bryston BP6 preamplifier over the ADL Esprit when paired with my Bryston 4B-SST2 amplifier. Or perhaps the additional set of interconnects and preamplifier in the chain added a level of noise/reverb that actually provided an impression of a larger soundstage – defining a space beyond the actual elements – i.e. the voices and instruments. Regardless, the Esprit held its own as a high-performance preamplifier in its own right with the capability to control five sources i.e. three digital and two analog, making it a viable alternative to consider. I should note that the primary shortcoming of the Esprit as a preamplifier would be that it can't be remotely operated – you just have to get off your butt to adjust the volume or the source – a good thing for couch potatoes, like myself.

Since the Esprit is also an ADC, analog-to-digital converter, I thought I'd put it through its paces by trying to convert tracks from vinyl over to hi-res digital files. The instructions indicated that with Mac computers no driver is necessary – essentially plug-and-play but with Windows PC a driver is required – unfortunately for me, I have a Windows Vista PC. Hooking up the Esprit DAC using the lovely ADL Formula 2 USB cable that I was shipped (the Esprit comes with a basic USB cable in the box) my computer found the device but was unable to install it. I went to the ADL-av.com site as indicated in the manual and downloaded the ADL USB Driver. rar file, though this didn't help, at first. The FAQ section of the ADL website told me I needed a WinZip /WinRAR application to un-zip the driver. With this, I finally got the Esprit installed, only to discover that I needed a recording application to use it. Fortunately there is some freeware out there – and I downloaded Audacity. I hooked up my Goldring GR1.2 turntable to my Pro-Ject PhonoBox SE II phono stage and then to the analog inputs of the Esprit, using the superbly built ADL Alpha Line 2 Interconnects that AuDIYo Inc. had provided. I recorded a couple tracks from Anne Bisson's *Blue Mind* album in 24/96 resolution – with the recording attenuation switch on the Esprit set to -12 dB (-6 and 0 dB settings are available for lower output phonostages). Once I fig-

ured out how to use Audacity – it worked like a charm. What were the results? Well, I have to say, they were amazing. The recorded LP version, though having some of the vinyl's surface noise and occasional ticks, sounded superior to my ALAC 16/44.1 CD-rip version of the recording in terms of soundstage size, smoothness, relaxed composure and warmth. Comparing this hi-res digitized version of the LP to the professional hi-res 24/96 digital version, I found the two files very similar in overall nature, though the pro-version was overall better in terms of dynamics and noise floor. I also compared direct LP playback to this digitized version. They sounded very similar though the digitized version sounded a touch lighter, cleaner but accentuated sibilants – it had taken on some digital characteristics. I would say that some of the glory of the vinyl was lost in translation but overall, I'd call it a success and a great opportunity for those with vinyl collections to be able to access their treasures digitally.

My time with the Esprit DAC and ADC preamplifier has been wonderful. Not only has it been a learning experience but also a very enjoyable listening experience. It's great to have a chance to experiment with a high-performance quality product that delivers a rich feature set, all at an affordable price. I believe the Esprit can serve to anchor a high-end computer/desktop setup or even be used as a simple standalone preamplifier / DAC in a mid-to-high-priced dedicated music system. The Esprit also provides a great opportunity to get more out of high performance headphones or digitize an LP or tape collection. Furutech under their ADL line has produced a winner with the Esprit!

quickinfo

Alpha Design Labs (by Furutech)
www.adl-av.com

Distributed in Canada by
AuDIYo Inc., www.audiyo.com
416-704-0105

ADL Esprit DAC and Digital Preamplifier
Price: \$899 CAD

Unison Research Simply Italy Integrated Tube Amplifier



Suave Kajko

If you've ever been to a show like the Toronto Audio Video Entertainment Show, you'll know that the tube amplifier product category is alive and well. You'll never see this type of amplification technology in your smart phone or tablet – that's true – but when it comes to listening to music at home, many listeners still very much prefer the sweet sound of tubes. And while there are many tube amplifiers that will set you back thousands of dollars, there are also some surprisingly affordable models. Take the Simply Italy integrated amplifier from Unison Research for instance, which retails for a reasonable \$2,450. Have I got your attention? Good!

design features

Unison Research is an Italian company that has been designing and hand mak-

ing quality audio components since its inception in 1987. This Simply Italy is a compact integrated amplifier designed to coincide with Italy's 150th birthday. Its design was inspired by and shares many features with the company's highly successful Simply Two integrated amp which was in production for many years. Much like the Simply Two, the Simply Italy has a single-ended ultralinear Class A design that outputs 12 watts per channel. It utilizes EL34 tubes in the output stage and ECC82 tubes in the preamp and driver stages. Thanks to its nominal load impedance of 6 ohms, this amplifier is capable of driving even the most demanding, 4 ohm speakers. Inside the Simply Italy, the power transformer and the first filter stage of the power supply are doubled, separating all preamp stages. The result is lower crosstalk and distortion. Unison Research calls this a quasi dual-mono design. Un-

like most manufacturers, this company makes its own very high quality output transformers and thanks to this the Simply Italy's output stage has one EL34 tube in a single-ended ultralinear configuration. This allows the pentode EL34 to operate in an intermediate manner between pentode and triode, but with increased linearity.

The Simply Italy is a compact component that will fit easily into many spaces where a full-sized component would be out of the question. It measures 26 cm (wide) x 35 cm (deep) x 19 cm (tall), and weighs 15 kg. Its wooden façade offers a source selection dial (CD, Tuner, AV, Aux, Tape) on the left and a matching volume dial on the right. Both dials offer a good feel and precision. Sandwiched between them are an On/Off toggle switch and a round tinted window behind which sits a green power indicator LED. Uni-



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son Research offers two versions of this amp: one with a black front panel with circular cherry wood inserts around the dials and the power switch; and another version with a cherry wood front panel and black circular inserts. In addition to looking nice, the wooden face plays a role in damping chassis resonances. Two stainless-steel bars help with the thermal isolation of the electronic circuits and output transformers. Between them sits an unassuming switch which allows the listener to toggle the amount of negative feedback in the circuit between 5 dB and 1.8 dB. The feedback switch affects some of the amplifier's parameters such as the damping factor, bandwidth and distortion, and allows the user to choose what sounds best with their specific speakers. Just below that is a small Unison Research badge. My review unit had the cherry front plate and I enjoyed its looks from every angle. Unison Research includes a black metal cage to cover the tubes for those who have little ones running around the house or curious cats. The build quality and finish of this amplifier is just excellent.

The rear connection panel of the Simply Italy offers gold-plated speaker terminals that will accept any type of connector, 5 RCA audio inputs and a single tape output. There is also an IEC connector for those who would like to try an upgraded power cord.

The supplied remote is just as attractive looking as the amplifier itself. It sports a wooden body and steel face and is quite comfortable to hold. This remote works with other Unison Research components such as CD players and tuners and hence its face is filled with over 30 tiny buttons.

performance

I listened to many hours of music in the background, letting the Simply Italy burn in, before sitting down to do more in-depth listening sessions. My source was the Bryston BDP-1 digital player connected through the Bryston BDA-1 DAC. The speakers used were my long standing Focal Electra 1008 Be II bookshelves. All cabling was provided by the Nordost Leif series cables.

First up was the Audiophile Voices VI album. Rebecca Pidgeon performing "Spanish Harlem" sounded delightful and I instantly got lost in the music. With

every track I listened to from this album, the Simply Italy offered a seductively rich and fluid midrange with plenty of high frequency detail. The bass line danced around tunefully from note to note. I clearly heard the distinct texture and tone of each of the various string instruments. The female voices sounded convincingly real, offering all the warmth and natural timbre of a live singer. At times I swore the artist was with me in the room. The Simply Italy positioned all the instruments and voices precisely within the soundstage, with ample air between them. The result was a very engaging performance.

Switching gears, I put on AIR French Band's Moon Safari album. The Simply Italy effortlessly resolved the various intertwined layers of sound. The soundstage was expansive and reached well beyond the limits of my room. The bass was deep, articulate and played with lots of richness. On the first track, "La Femme D'Argent", the sound of rain was realistic, although perhaps not quite as natural as I've come to expect from my reference ModWright Instruments LS 100 tube pre-amp and KWA 100 amp.

The TRON: Legacy soundtrack, composed by Daft Punk, combines an 85-piece orchestra and electronic music like no other. The Simply Italy conveyed the increasing energy and dynamics of "Overture" excellently. It showed its ability to create a soundstage that slowly stretched from an image that was just a few feet wide to one that reached well beyond the walls of my room. The bass notes in "The Grid" were rich and sank lower than I expected. I turned up the volume, closed my eyes and my skin tingled as I became completely consumed by the music. The Simply Italy was undeniably hitting all the right notes.

The energy with which this amp played The Black Keys was pretty amazing. Despite its compact size, this amp is definitely capable of belching out energy and dynamics that surpass its dimensions. But like any other amp, this one does have its limitations. The Simply Italy does not have the massive power or dynamics as my ModWright duo and hence you shouldn't expect it to drive a demanding pair of speakers to their full potential. Then again at less than a third of the price of the ModWright gear, you shouldn't be

expecting such tricks.

Changing the musical direction once again, I listened to a few tracks from Tutti! Orchestral Sampler from Reference Recordings. This fine classical selection played with great fluidity and energy through the Simply Italy. Each and every instrument benefited greatly from the tube harmonics and detail extraction of this amp. The sound was organic, well balanced and multi-dimensional. The quiet passages played with delicacy, while the louder sections offered a dynamic presentation. Perhaps the only aspect that lacked a little bit was weight in the bass that I normally hear on this album.

As I listened to the Simply Italy, I of course had a chance to play with the remote and quickly discovered a couple of small shortcomings. When adjusting the volume, the amp produces a little distortion in the speakers. This was most noticeable at very low volumes and when a source wasn't playing, and did not happen at all when using the volume dial on the amp itself. While I really enjoyed the styling of the remote, I was not impressed with the buttons. They are tiny, uncomfortable and make an unnecessary noise when pressed.

The Unison Research Simply Italy is a little but surprisingly mighty amp. If you'd like to experience the warmth and fluidity that only a tube amplifier can offer, without reaching too deep into your pocket, this is your chance. The Simply Italy offers a smooth, sweet sound that engaged me deeply with every music genre that I listened to. For \$2,495 it presents a pretty remarkable value – you get what you pay for and more. I give the Simply Italy my highest mark. If this amp lands within your price range, you definitely need to listen to one.

quickinfo

Unison Research

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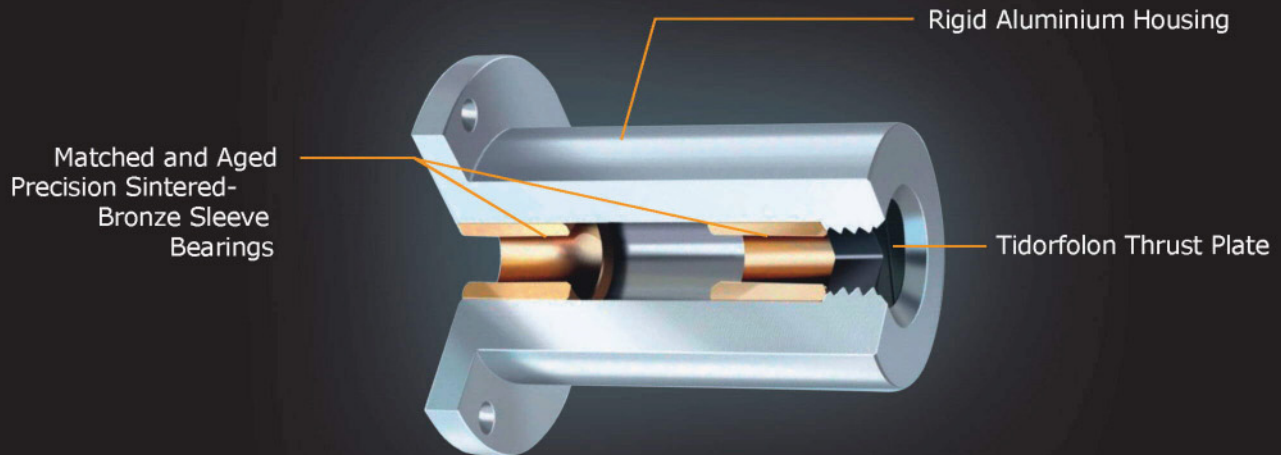
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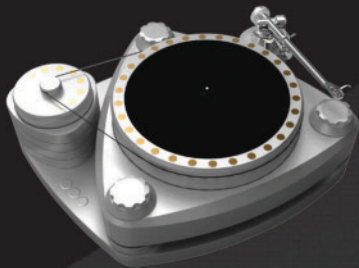


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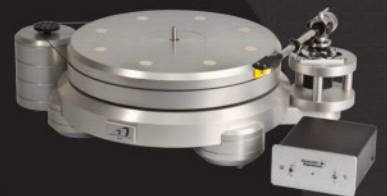
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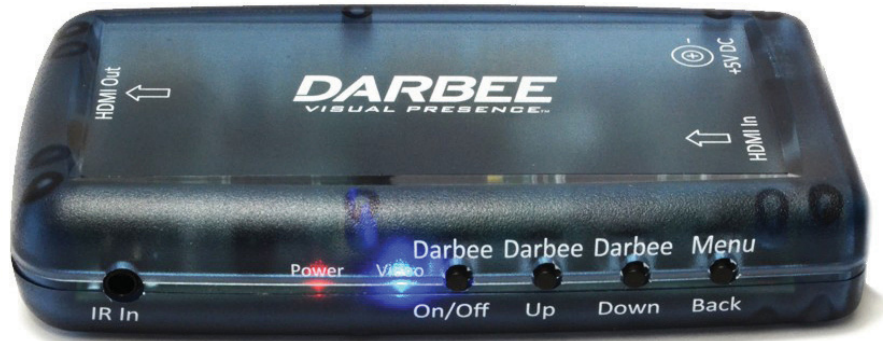
Darbee Visual Presence DVP 5000 Darblet Video Enhancer

Michael Osadciw

I was intrigued when I heard about a new video enhancer that claims to improve images of various video sources. How can this be? I'm normally a little sceptical anytime I hear the terms "video processor" or "video enhancement". How could a device make a picture better than the original signal sent to it? Without question, I'm a purist that believes the video signal should not be altered to achieve the highest fidelity in a video presentation. If viewing accurate, high fidelity video is the end goal, then that statement remains true. Although I also believe that this doctrine doesn't need to be followed all the time, in every single situation. My justification of straying from this purist point of view is because I believe we should be allowed to have some fun with video too.

When I calibrate video displays for clients, I normally turn off all sorts of video enhancement circuitry. All TVs (plasma, LCD, LED) and projectors offer these picture enhancements as selling features. Contrast enhancers, edge enhancements, black level expanders, colour expanders and other settings often congest the user video menus. Most often they are explained very vaguely in the TV's manual. Sadly most of these enhancements are actually detrimental to the picture quality and prevent you from seeing the picture that your display is truly capable of.

When put to the test with a video generator, a TV show or movie, these enhancers can mutilate the original video beyond what's acceptable and enjoyable. Who wants that? Some of these settings can make a picture look dim because of contrast enhancers – i.e. it might be hard to see midrange details because the black and white ends of the video signal are exaggerated. Other picture enhancements crush black details and clip the white parts



of the picture (black level expanders turn dark visible details into complete blackness, while white level expanders turn subtle white details into a single shade of white). Other settings can make the picture appear too colourful or enhanced because colours are too bright or edges have white halos around them. Turn on one of these controls during a hockey game and you might see a white glow surrounding the puck.

It can be said that manufacturers have good intentions adding these controls believing that you will actually enjoy them when watching low-fi signals such as cable TV, streaming video, or even better quality sources like DVD and Blu-ray. Unfortunately in reality this is rarely the case.

design features

The Darblet was developed to process an image using algorithms respectful of how the brain will process it when seeing the final image. In essence, it makes a 2D picture look more three dimensional without the need for extra pixels on the video display or without the false sense of sharpening using traditional edge enhancement controls. The Darblet claims to create an image with greater depth on a 2D screen, heightening the sense of realism and clarity.

The Darblet sits between your video

source and your display, and is very simple to connect. Just plug in the power, HDMI in and HDMI out. That's it While not the prettiest flower in the garden the Darblet is a

small, translucent plastic box rounded at the corners. The internal circuitry can be seen right through the casing, along with three LEDs emitting a mesmerizing glow letting you know that it's working. The buttons on the front panel of the device are duplicated on the included credit card-size remote control. When connected to my rather rigid HDMI cables, I had a difficult time keeping the unit flat on a surface because of its light weight. About the size of a cell phone, it's a device I wish I could hide behind some other gear but that's not an option if you want to use the remote control, as I did in this review. There is however an input jack for an optional IR remote control extender for those who wish to tuck it away.

performance

"I get it." I mean, I understand why this device could be beneficial in many cases and



why it's better than the enhancement controls found in TVs and projectors. There is an appreciable difference between watching native video and using the Darblet video enhancer. Depending on how you set it, via the remote or front panel, you can add "More Darbee" or "Less Darbee" from a range of 0 to 120%. You also have the option of selecting one of three presets, each one more aggressive than the next: High Def, Gaming, and Full Pop. High Def was my favourite because it was least obtrusive on the video while still adding perceivable depth to the picture. The Gaming and Full Pop modes made black and white levels, colour, and grain a little too aggressive for my tastes. How you choose to set it up depends on the quality of video you feed it, your tastes, and your screen size.

Before I watched any video, I put the Darbee through the ringer feeding it test patterns from my Accupel DVG-5000 video test pattern generator. I used two different displays during this review - a Panasonic TC-P60S30 60 inch plasma television and a JVC X55 projector on a 153 inch Seymour Screen Center Stage XD screen. All HDMI cables were Monster 1000HD. First I wanted to see if the Darblet reduced resolution on the multiburst pattern. To my surprise, the device caused zero loss of resolution on all resolution settings, up to 1080p. I also checked for black level crushing (loss of black level detail) and white level clipping (loss of bright white level detail). Again, the Darblet appeared faultless using the test patterns. So far, so good. When checking for edge enhancement, it was difficult to see if the Darblet added any enhanced edges at all on my 60 inch TV screen. It was only on the 153 inch projection screen where the device gave way to a tiny enhanced edge in its most aggressive modes on the sharpness patterns (with JVC's e-shift turned off because that feature adds its own enhanced artefact). Flipping through most patterns in my video generator, I found it hard to fault the Darblet when used with two different, properly calibrated displays. The only exception was the chroma multiburst pattern where there seemed to be a slight loss in colour resolution, in the Full Pop mode.

Putting test patterns aside, I watched 2009's Star Trek reboot Blu-ray with the

Darblet in place. On the projection screen, the film looked fantastic without any video processing turned on. Activating the Darblet in High Def did give the image more perceived depth, just as advertised, and I found that most scenes benefitted from this. In one of the opening scenes, inside the Enterprise spaceship, it added more space between foreground and background layers, giving the picture a little more depth. I determined that the 30-50% range of the Darblet setting was sufficient for my enjoyment of well produced movies. On the Panasonic plasma TV, I found the differences a bit more difficult to discern, most likely because of the high quality source and smaller screen combination. I found this depth improvement to be most noticeable in well lit scenes, and not just with Star Trek but with other movies as well, in both Blu-ray and DVD formats. I paid close attention to the picture detail and sharpness with various movies but can't say that I was able to observe any improvements in these areas.

Watching the Blu-ray documentary Pink Floyd: The Wish You Were Here Story with the Darblet in the Gaming and Full Pop modes was a bit of a different experience. I found that the video appeared a bit too processed when watching these older and very grainy video clips of the band performing. Film grain didn't appear analogue anymore; the experience felt a little more digital, with the noise appearing a little more artificial. I watched some other Blu-ray films with a heavier grain structure, like the original Predator movie, and I observed the same results. However watching these scenes in Darblet's High Def mode once again benefitted from perceived picture depth and looked a little bit more natural.

Following this, I used the Darblet when watching streaming video through my Apple TV. Whether it was a movie through iTunes or watching YouTube videos, the Darblet added visual presence like I hadn't experienced before. The overall quality of these video sources is of course far from ideal, and not material I normally watch, but I can appreciate why someone would want to add a device like the Darblet to spruce things up a bit. When you're not concerned about retaining the 100% true vision of the director, the Darblet can enhance the picture in a visually pleas-

ing way. By this I mean that the video appeared to offer a better presence and perhaps was a little more realistic at times thanks to the added depth of the picture, depending on the quality of the video itself. In the Gaming and Full Pop modes, the Darblet gave me the impression of more on-screen contrast, where the lighter parts of the picture appeared to expand a touch more on the screen for a little more impact. In scenes that contained some dark and some light picture element, the darker parts of the picture appeared a little more expanded, giving the impression of more presence to the dark parts. During dark scenes I didn't really notice these changes.

Given the variety of video sources out there, and the drastic variations of quality of recorded video, the Darbee Visual Presence DVP 5000 Darblet is an interesting device for those who would like to enhance their video watching experience, without having to worry about the side effects that most TV or projector enhancement features suffer from. The most noticeable enhancement that I observed is the perceived improvement in picture depth, which most sources can benefit from. The better the quality of the video source, the more of a visual impact the Darblet appeared to offer. For \$345 this is a device worth trying if you'd like to have some fun with your video.

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