As you might surmise by its name, the Peachtree Audio iDac is a DAC (digital-to-analog converter) that has an iPod dock. And while the dock is part of its feature set, it's far from the whole story. The iDac also has provisions for two S/PDIF, two TosLink, and one USB input. That's a whole bunch of digital inputs. But the iDac needs this plethora of inputs to fulfill its true function—a one-box hub for all the digital music sources on your computer desktop or in your living room.

The Feature Set

As you would expect from a current generation D/A, the iDac supports 96/24 via its USB input and 192/24 via S/PDIF. Using the latest ESS 32-bit Sabre32 DAC chipset as part of a multi-layer DAC board that has over 450 individual components, Peachtree has developed a DAC that can cope with both high- and low-jitter sources. The iDac also uses a linear instead of a switching power supply as well as eleven regulated sub-supplies to lower internal noise and interference.

According to Peachtree Audio, “the ESS Sabre32 DAC’s patented jitter-reduction circuit re-clocks the digital signal before passing it through a high-resolution 24bit/192kHz bit-perfect processor. Re-clocking is needed for computers and most streaming or hard-drive-based music servers because most have high levels of jitter and/or noise. Transformer-coupling each digital input eliminates noise, typically associated with ground problems and switching power supplies. The USB connection is galvanically isolated, eliminating noise generated by your computer’s switching power supply and greatly improving sound quality.”

The Sabre DAC doesn’t re-clock in the traditional way. Instead it uses something called a “hyper stream modulator” inside the chip to reduce jitter at the master clock. “A patented technique is used to re-create the audio data in a crystal-controlled low-phase-noise clock domain completely isolated from the clock domain of the transport medium.”

On the back of the iDac, on either side of the two RCA analog-output connectors, are pushbuttons. On the left resides a “digital filter switch” which gives you the choice of either an NOS (no oversampling) or NAL (non-aliasing) digital filter, the second of which will upsample the signal to 192/24. On the
right you’ll find a “hi-bit/lo-bit” switch, which changes the way the digital processor uses its DAC chip. In lo-bit mode, the DAC uses dual processing, while in hi-bit mode the iDac switches to quad processing. As you might guess by the location of these two switches, they are not for everyday toggling back and forth. Instead I’d advise new owners to run their own listening tests, decide which settings they prefer and then leave ‘em alone.

Given its name, it would be weird if the iDac didn’t have a built-in iPod dock. But what makes the iDac’s dock special is that it is a pure digital connection that takes the digital signal from the iPod without going through the iPod’s internal D/A. The iDac joins the Wadia iTransport 170i as one of the few (but expanding number of) products that offer a direct digital connection to an iPod.

Which iPods does the iDac support via its digital dock? The iPod Touch (first through current generation), iPod Classic (80GB, 120GB, 160GB only—no earlier versions supported), and iPod Nano (second, third, fourth, and fifth generation) all will deliver a direct digital connection when tethered to the iDac. In theory the iDac’s internal DAC can even support higher bit-rates than the 48/16 limit imposed by iTunes, but since no iPods support any higher bit rates, 48/16 is the current limit.

I mentioned earlier that the iDac has a plethora of inputs. But its audio output set is limited. The iDac offers only one pair of line-level analog audio outputs and these outputs are at a fixed level. This means that you will need to have another component in your system to attenuate or increase volume levels. In a conventional system a preamp, AV/controller, or the volume controls on your integrated amp or receiver will accomplish this task. But it’s too bad that you must use some kind of additional device to control volume since any additional device in the signal chain will have some negative impact on transparency and detail, which are two areas where the iDac excels.

Housed in a piano-black case (it comes in a soft cloth bag to keep the finish pristine), the iDac has a strong family resemblance to other Peachtree Audio products. The front panel is simple and uncluttered with six source-selector buttons and one slightly larger on/off button. A nice ergonomic touch: When you select a source that is inactive or nonexistent the blue circle around the buttons glows intermittently, while with a “good” source the circle has a steady glow.

The iDac’s remote control leans toward the minimalist side with only source selection, on/off, and controls for navigating your docked iPod. I would have liked to have seen a mute button, but if you use the iDac with a receiver or preamp, their mute controls will suffice. Perhaps the next version could also move the NOS/NAL and hi/lo bit-rate toggle switches onto the remote.

Since the iDac has a fixed-level analog output I coupled it with a Reference Line Preeminence One passive preamp for most of the review. But I also did some listening sessions where I connected the iDac directly to the inputs of my Accuphase P-300 power amplifier and used the amp’s built-in level controls to adjust system volume. The P-300 has two sets of input connectors and the ability to switch between them via a front-panel toggle. This feature makes it possible to do real-time A/B listening tests between different DACs at my desk (since the amp is within arm’s reach underneath my desk). The P-300 is also great on winter days when the waves of heat coming from under my desk serve as an effective space heater. This summer, the P-300 goes back in the closet.

<table>
<thead>
<tr>
<th>SPECS &amp; PRICING</th>
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<tr>
<td><strong>Type:</strong> USB DAC with iPod dock</td>
</tr>
<tr>
<td><strong>Frequency response:</strong> 5Hz-100kHz</td>
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<tr>
<td><strong>S/N:</strong> 118dB “A” weighted</td>
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<tr>
<td><strong>Output voltage:</strong> 2V RMS</td>
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<tr>
<td><strong>Output impedance:</strong> 10 ohms</td>
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<tr>
<td><strong>Dimensions:</strong> 3.5” x 9” x 10”</td>
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<tr>
<td><strong>Weight:</strong> 8 lbs.</td>
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<td><strong>Price:</strong> $999</td>
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**ASSOCIATED EQUIPMENT**

**Source Devices:** MacPro model 11 Intel Xeon 2.66 GHz computer with 12 GB of memory with OS 10.6.7, running iTunes 10.2.1 and Amarrar 2.1.1 music playing software, Pure Music 1.65a music playing software, Audirana music playing software. The Fidelity M-1 DAC, Bel Canto 3.5 Vb.

**Preamps:** Reference Line Preeminence One passive preamp. Amplifiers: Bel Canto 5-300 stereo amplifier, Edge Electronics AV-6, Accuphase P-300 power amplifier.

**Speakers:** Studio Electric Monitors, ATC SCM7s, Silverline Minuet Supremes, Paradigm S5s, Aerial Acoustics 5Bs, Role Audio Kayaks, Earthquake Supernova mk IV 10 subwoofer.

**Cables and Accessories:** Locus Design Polestar USB cable, Locus Design Nucleus USB cable, Wireworld USB cable, PS Audio Quintet, AudioQuest CV 4.2 speaker cable, AudioQuest Colorado interconnect, Empirical Audio Coax digital cable, Audioprism Ground Controls, and Adam Audio speaker wedges.
So what’s up with the two stealth buttons on the backside of the iDac? The instruction manual doesn’t give much info as to why or which setting is “better.” To hear the sonic differences between hi-bit/lo-bit and NOS/NAL settings, I hooked up the iDac directly to the P-300 power amplifier. With only a one-meter pair of AudioQuest Colorado cables between the iDac and the P-300 I could clearly hear differences between the settings. Most listeners will prefer, as I did, NOS setting. The NAL sounded too tight and matter-of-fact with less bloom and a smaller overall soundstage. I also preferred lo-bit to hi-bit; lo-bit was more relaxed and to my ears, more natural. I advise you to try all the combinations. My real-time A/B comparisons between DACs turned out to be especially interesting. First I put the Musical Fidelity M1 DAC up against the iDac, using the internal USB inputs. The iDac won this face-off easily with superior performance in every meaningful sonic category. But the tables turned when I inserted the V-Link USB adapter (which converts USB to S/PDIF) into the M1’s signal chain. The M1/V-link combo was on the same sonic level as the iDac. I preferred the Musical Fidelity combo’s solidity and dimensionality to the iDac, but the iDac still excelled in lateral image focus, slam, and overall image size.

Next I compared the iDac’s USB input with the Musical Fidelity V-Link feeding the iDac’s S/PDIF input. Much to my chagrin I heard the same sonic differences between the iDac USB and the V-Link inputs as I had heard between the iDac and the Musical Fidelity M1 fed by the V-link. Through the V-Link the image was more three-dimensional and each instrument seemed to be better defined. Perhaps USB implementations are becoming more critical to the overall sound than the DACs themselves?

Further tests were certainly in order, so I replaced the V-Link with Empirical Audio’s newest version of the Off-Ramp 4 USB-to-S/PDIF adapter box. Differences between the iDac’s stock USB circuitry and the Empirical Off-Ramp were startling. When I used Empirical Audio’s Off-Ramp 4 for USB translation duties I finally heard the iDac’s capabilities when fed a low-noise low-jitter signal. Wow! The soundstage grew noticeably in size from what the iDac was able to produce with either the V-Link or its own internal USB converter. Along with the expanded soundstage size, dimensionality and image solidity also improved. Spaces between various instruments and the edges of individual instruments were better defined by the Off-Ramp than by other USB solutions. Whatever the reason, the Empirical Off-Ramp/iDac combination turned out to be the best sound I got from the iDac, competitive with the best digital front ends I’ve reviewed, regardless of price or connection type.

And what about that iPod dock? That, too, turned out to be a pleasant surprise. When I conducted level-matched A/B tests between a docked iPod Classic 160 and the USB feed from my Mac Pro computer I could not hear any difference between the two. None, nada, zip.

Given how different the iDac can sound depending on the quality of the digital source, does it have its own intrinsic sound? Yes, it does. To me, the sign of a good D/A is whether it can translate and retain the micro-dynamics of each instrument. On “Holiday for Sweet Louise” from one of my longtime reference CDs, 3d Matinee’s Meanwhil, the iDac kept everything in this rock-and-roll mix from getting messy. On this 3d Matinee cut, the surge of the keyboards works in oddball rhythmic counterpoint to the electric guitar line; each pulses or surges at different moments. This subtle interplay comes through clearly with the iDac. The core iDac sonic character is musical and non-fatiguing while still being precise and detailed.

How does the iDac stack up against the Wyred4Sound Dac2?

I reviewed recently? I’d have to call it almost a sonic dead heat, but the Dac2 wins hands-down when it comes to flexibility and overall value. On USB inputs the iDac sounded less dynamic than the Dac2. The iDac also lacked some of the Dac2’s imaging precision and dimensionality. When both the iDac and Wyred4Sound were fed the same signal from an Empirical Audio Off-Ramp 4, sonic differences vanished. But when you consider the Dac2’s better USB implementation, excellent built-in volume control, and ability to drive a pair of balanced XLR outputs as well as a pair of single-ended RCA outputs, you see why I think it’s a better overall value. But if you already have a high-quality preamp, the iDac would be a more cost-effective choice.

With a high-definition digital signal the iDac can create an almost holographic soundstage. I played a bunch of high-def music through the iDac—both my own recordings and those from Reference and MA. In imaging palpability and dimensional definition the iDac pretty much disappeared. I wasn't listening to the iDac as much as listening through it.

Why iDac?

In the automobile business there’s an old and somewhat crude saying, “There’s an ass for every seat.” It concisely conveys the concept that every car is made with a particular customer in mind. So if we look at the iDac this way, what would be the best place for an iDac?

I see the iDac as an ideal step-up/catch-up product. It’s perfect for the audio newcomer who wants to upgrade his computer audio system or an experienced audiophile who wants a way to bring all those digital audio and video sources like X-Boxes, Apple TVs, Blu-ray players, computers, and even iPods into his two-channel analog system.

But there is a third customer for the iDac. I suspect that many 3+-year-old DACs that lack high-def capabilities, even those with substantially higher original price tags, could be replaced by an iDac. The sound that an iDac can pull from even a 320bps MP3 file on an iPod is pretty amazing. But with non-lossy 16/44, 96/24, and 192/24 music files coming in through its S/PDIF inputs, the iDac demonstrates its full sonic potential. This is one sonically serious DAC whose performance transcends its name. tcs