Audioengine B1 Bluetooth Receiver review

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by The Computer Audiophile
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My office consists of an iMac 5K retina, Macbook Pro, iPad, Google Nexus 7, and my iPhone 6+. All of these devices either contain or stream audio that I listen to while working. Whether it's Internet radio, audio books, TIDAL HIFI, or podcasts I prefer to listen to the audio through my main audio system, which fortunately is also in my office. The question for me is always, how do I get the audio from any of my devices to my stereo system as easy as possible with the best quality possible? One answer to this question is the Audioengine B1 Bluetooth Receiver. The B1 is all about balance between convenience and quality. The convenience offered by a Bluetooth connection is currently second to none. There are no WiFi networks or passwords to worry about. Simply tap connect on a device on that's it. On the other hand, there's no getting around the fact that Bluetooth is currently a lossy way to stream audio. But, using the aptX codec companies like Audioengine have increased the quality of these lossy streams greatly. aptX has moved Bluetooth audio from barely acceptable into the realm of highly desirable under the right circumstances.

The Audioengine B1 Bluetooth Receiver is a simple yet very robust device. The B1 accepts incoming Bluetooth audio, whether it's aptX or not, and outputs this audio on either an optical digital TosLink connection or full size analog RCA jacks. According to Audioengine the custom precision-tuned Bluetooth antenna is capable of supporting distances of up to 100 feet between the B1 and the transmitting device. During my tests I was able to walk from one end of my house to the other end, with walls in between, and successfully keep the audio stream intact without a single dropout while using an iPhone 6+.

Setup of the B1 is absolutely simple. At power on the B1 goes into pairing mode automatically. After powering git on find the B1 on the transmitting device such as an iPhone or iMac and select connect / pair. There are no passwords to remember, no WiFi networks to connect to, and no software to install. Plus, in an office setting Bluetooth may be the only acceptable means of connecting to stream audio. Devices such as the Apple AirPort Express that supports AirPlay may not be allowed in a corporate setting.

In my office I connected the Audioengine B1 to the Berkeley Audio Design Alpha DAC RS in my main system via a TosLink optical cable. Right away I noticed the B1 outputs all digital audio at 48 kHz even if it's rebook CD quality of 44.1 kHz. At first I thought this was a negative thing given that almost everything I stream to the device is 44.1 kHz material. However, after further consideration I don't consider this an issue at all. The Bluetooth aptX codec is lossy to begin with, so it's not like the B1 is accepting bit perfect lossless audio and outputting something entirely different. The B1 and the transmitting Bluetooth device should be considered an ecosystem that works to output a final product (audio). Whether this output is acceptable or good or great is up to the taste of each individual user. Based on my listening to the B1, I've already made a much bigger deal over the 48 kHz resampling than I should have. The B1 sounds better and works better than any other Bluetooth receiver I've used in recent memory.

I also tested the analog output of the B1 by connecting it via RCA cables to a Pass Labs INT-30A integrated / preamplifier. The INT-30A is connected to the same Pass Labs XA160.5 amplifiers as the Berkeley Audio Design

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Alpha DAC RS that I used to test the digital outputs of the B1. In this configuration I streamed many albums directly from my iPhone 6+ running TIDAL HIFI to the Audioengine B1 Bluetooth Receiver. The sound quality was not as good as using the digital outputs, but there's no way it should be even close. When using the digital outputs I used a DAC that costs over $16,000! However, the sound quality using the analog outputs of the B1 was really nice. Immediately before starting to write this review I listened to the new Mary J. Blige album called The London Session streamed from TIDAL HIFI on my iPhone 6+. Listening through the analog outputs of the B1 I got into the music much more than I thought I would. I didn't want to stop listening and start writing. To me this is the mark of both good music and good audio equipment.

Most of my everyday use of Bluetooth audio isn't critical listening from my dedicated listening chair. Rather it's listening to the audio of every day life. For me that's podcasts, YouTube videos, and something from the streaming service of the hour. This audio comes from any of my devices at any time. I'll frequently be writing on my iMac and receive a text with a link to a YouTube video on my iPhone. During this review period it was really neat to click on the text, watch the video, and have the sound come through a $100,000+ audio system rather than the iPhone 6+ speaker. Through the Audioengine B1 this worked and sounded great. At other times I connected my iMac to the B1 and the rest of my audio system. This worked great for watching videos on Grammy.com, including the cool but awkward performance of Big Girls Cry by Sia standing with her back to the camera. The video was so-so, but the audio was great. On my iMac I also frequently listen to The Adam Carolla podcast through iTunes or even directly streamed from the show's website. Adam's nasally drone of a voice isn't something of HiFi dreams, but I much prefer to hear the podcast through my main audio system than the speakers on my iMac. With Bluetooth audio, and the Audioengine B1 specifically, it isn't about perfection, it's about preference and getting better sound than one normally gets through traditional means.

The Audioengine B1 Bluetooth Receiver is a great performer both sonically and connectivity-wise. The B1 makes a lot of sense in many environments where better sound is desired and the convenience of Bluetooth is demanded. Yes Bluetooth is lossy, but there's a time and place for everything. The B1 maybe isn't for the extremists who have to play 32 bit / 384 kHz or else their ears will bleed, rather it's for everyone else including me. I love Bluetooth audio and I love my lossless high resolution that Bluetooth will likely never support. It's not a case of either or, but a case of using the right horse for the right course. Through the use of aptX to improve sound quality well beyond previous versions of Bluetooth and a well engineered antenna, Audioengine has produced another winner in its lineup of solid components.

Image Gallery

Product Information:
- Product - Audioengine B1 Bluetooth receiver
- Price - $189
- Product Page - Link

Associated Music:
- Frequently Used Review Playlist (PDF 32 KB) 🔗
- Frequently Used Review Playlist (JPG 4.1 MB) 🔗

Associated Equipment:
- Source: Aurender W20, Auralic Aries
- DAC: Berkeley Audio Design Alpha DAC RS, Auralic Vega
- D-to-D Converter: Berkeley Audio Design Alpha USB
- Amplifier: Pass Labs XA160.5 Monoblocks
- Loudspeakers: TAD Labs CR1 Compact Reference
- Remote Control Software: JRemote, Aurender iOS App, Auralic Lightning DS
- Remote Control Hardware: iPhone 6+, iPad (3rd Generation)
- Network Attached Storage (NAS): Synology DS1812+
- Audio Cables: Wire World Platinum Eclipse 7 Balanced Interconnects, Wire World Platinum Eclipse 7 Speaker Cables, Wire World Platinum Starlight 7 USB 2.0, Wire World Platinum Starlight 7 Digital Cables,
- Power Cables: ALO Audio AC6 Power Cables
- Ethernet Cables: AudioQuest Vodka Ethernet Cables throughout system
- Network: Cisco SG200-26 Switch, Baaske MI-1005 Ethernet Isolator, Apple AirPort Extreme, PFSense Router / Firewall, Cisco DPC3000 Docsis 3.0 cable modem, Comcast Extreme 105 Mbps Internet Service

Categories: Digital Interface Converter, Digital to Analog Converter, Wireless, S/PDIF (TosLink) Interface

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wwaldmanfan - 02-19-2015, 03:00 PM   ↩ Reply

Thanks for posting that informative review. AudioEngine makes great, affordable stuff.
I have a pair of their A2+ active desktop speakers that outperform my B&W MM-1's, at half the price.

Superdad - 02-19-2015, 05:19 PM   ↩ Reply

Chris: you wrote "Plus, in an office setting Bluetooth may be the only acceptable means of connecting to stream audio. Devices such as the Apple AirPort Express that supports AirPlay may not be allowed in a corporate setting."

Actually, in a corporate office with a bunch of people using Bluetooth headsets and mice, the B1