



NightHawk: The Evolution of Innovation

NightHawk is AudioQuest's full-bore assault on both the state of the headphone art and on the limits to which quality, innovation, and sustainability can be achieved at an affordable cost.

When we decided to build NightHawk, we knew it had to be something special—it had to have a real reason to exist—because, after all, no one needs another ordinary headphone. To that end, we started from the ground and worked our way up, thoroughly questioning and reevaluating every aspect of headphone design, gradually optimizing necessities while eliminating excess.

During that process, we considered many potential names. We knew that our first headphones had to have an appropriately special name—a name that conveyed power and freedom, inspired ideas of physical and emotional transportation, complemented the overall look and feel of the product, and still left room for growth. After careful consideration, NightHawk was chosen to lead what will be a complete family of headphones that match outstanding performance with extraordinary value.

About the Cover: Justin Maller

Justin Maller, an Australian freelance illustrator and art director based in Brooklyn, NY, created the image that adorns the front of our NightHawk packaging and Flight Manual. We admire Justin's work and feel that it echoes our own creative process: As with the component parts of NightHawk itself, each faceted shard of Justin's work is a distinct entity made to complement the whole.

We're delighted to have worked with Justin in the creation of NightHawk's cover art. As our family of headphones grows larger, stronger, and more complete, we look forward to seeing more of Justin's winged creations emblazon our packages and inspire our users.





Innovative Materials: Beautiful, Sustainable Liquid Wood

NightHawk's earcups are made from a revolutionary new material known as "Liquid Wood"—actual wood that has been combined with reclaimed plant fiber, heated, liquefied, and processed in such a way that it can be injection molded. Compared to ordinary plastic or wood, however, Liquid Wood has far superior acoustic properties and provides a seemingly endless array of geometric possibilities. In NightHawk, we use Liquid Wood to shape our earcups to more closely resemble the human ear, thereby providing a more complete and comfortable fit, reducing stress on the listener's head and ears. And, unlike typical plastic, Liquid Wood is environmentally friendly—more than merely beautiful to behold, it is also *sustainable*.



Driver Technology: Biocellulose Diaphragm & Split-Gap Motor

Most of today's headphones use diaphragms made from Mylar—an inexpensive, lightweight, and technologically mature plastic material. Unfortunately, Mylar is inherently flimsy and brittle, typically distorting as the audio signal reaches high frequencies of 6-10kHz and invariably causing listener fatigue. NightHawk takes a radically different approach. Inspired by the advanced drive-units used in today's high-performance loudspeakers, NightHawk's 50mm high-excursion driver has a biocellulose pistonic diaphragm and a compliant rubber surround. The biocellulose material is rigid and self-damping, making it far more accurate and musically pleasing than Mylar. In addition, NightHawk's patented split-gap motor design dramatically reduces intermodulation distortion to provide a clean, well-defined broadband response and a large, naturally detailed representation of space. Your music sounds clean, clear, large, and *alive*.



Anything But Ordinary: A Loudspeaker-Inspired Headphone Experience

Many of NightHawk's design elements are successfully implemented in today's most innovative loudspeakers, but have never been used in headphones. Much like the internal bracing of a beautiful loudspeaker cabinet, NightHawk's sophisticated earcup enclosure incorporates support beams that enhance structural integrity and minimize unwanted resonances and vibrations. An elastomeric coating is carefully applied to the enclosure's internal surfaces to further reduce harmful vibrations, while a damping material comprising a purposeful blend of wool and polyester enables an extraordinarily smooth, natural frequency response for a deeply immersive and emotionally compelling listening experience. With NightHawk, vibration-induced distortion is intelligently minimized, allowing music to breathe freely.



Diamond Cubic Diffusion & 3D-Printing Technology

NightHawk is a semi-open headphone with a biomimetic grille inspired by the underlying structure of butterfly wings—a fascinating diamond cubic latticework that diffuses light to create iridescence. Visually beautiful, technologically complex, and built to a much larger scale in NightHawk, the grille's intricate latticework diffuses *sound* and defeats the resonances that ultimately distort and damage our music. Far too complex to mold or machine, NightHawk's grille can only be created through 3D printing via an advanced form of additive manufacturing known as "Selective Laser Sintering." NightHawk, the first completely original production headphone to use a 3D-printed part, represents beauty, intelligence, and responsible innovation.



Ergonomics: Removing the Barriers between Listener and Music

Sensitive ergonomics in a headphone design remove unnecessary boundaries between the listener and his or her emotional involvement with the music. NightHawk's flexible headband efficiently distributes the headphone's weight, providing a feel that is both comfortable and comforting—you'll *want* to wear NightHawk. Its simple yet intelligent, patent-pending suspension system allows the earcups to move freely, accommodating heads of nearly any shape or size, while effectively decoupling the earcups to counteract intrusive resonances. NightHawk's earpads are made of soft, durable protein leather—again shaped to resemble the human ear—with greater thickness toward the rear of the pad, thus providing additional comfort while setting NightHawk's drivers at an angle optimized for precise, stable imaging. Listen for hours—in comfort, immersed in music, moved by NightHawk.



The NightHawk Cable

NightHawk benefits from AudioQuest's 30+ years of experience in the high-performance cable business, including a headphone cable purposefully designed to minimize distortion, promote intense user satisfaction, and provide a deep emotional connection to the music. It uses many of the same ingredients found in our speaker cables and interconnects, including high-purity Solid Perfect-Surface Copper+ conductors, Foamed-Polyethylene insulation, Carbon-Based Noise-Dissipation System (NDS), and silver-plated terminations. The cable's exceptionally soft nylon braid minimizes mechanical noise and complements NightHawk's quiet, confident beauty, while its 3.5mm plug has a 45° scooped shape designed to provide a satisfying feel as you make and unmake connections. In addition, we include a custom 3.5mm-to-1/4" headphone adaptor that, like our finest cable connectors, features thick Direct-Silver plating over the highest quality base metal, resulting in a part that isn't merely functional, but also meets the standards set by NightHawk itself. Every bit of NightHawk was designed to exude quality, performance, innovation, and beauty.



AudioQuest: Matching Value and Performance

Founded in 1980 by William E. Low, AudioQuest creates high-quality analog and digital cables and accessories for beautiful music and movies. Our mantra is “Do No Harm.” As such, our goal is to always remain truthful to the original signal, minimizing distortion while bridging the emotional and intellectual gaps that exist between artist and audience.

AudioQuest cables combine solid conductors, high-purity metals, specialized geometries, and stable dielectrics, among other sophisticated design elements, to enable clean, clear, beautiful sound and images. AudioQuest’s core values are evident in all of our products: Whether we’re discussing a Bridges & Falls analog interconnect; Diamond Optical, USB, HDMI, or Ethernet digital cable; a Type 4 or WEL Signature loudspeaker cable; an NRG power cord; or our award-winning DragonFly® USB DAC + headphone amplifier, William E. Low’s thirst for truth, pleasure, and total sonic immersion is clearly evident.

However you decide to connect to your media, AudioQuest develops and delivers low-distortion, attractive, reliable solutions that represent both extraordinary value and exceptional performance.



DragonFly®: Beautiful Sound from Any Computer, Anywhere

The size and shape of a USB thumb-drive, DragonFly is a digital-audio converter and headphone amplifier with a USB plug at one end and a 3.5mm minijack at the other. It connects to any Mac® or Windows® PC and bypasses the computer's compromised audio circuitry to deliver beautiful sound to earbuds and headphones, desktop speakers, or to a full-blown home entertainment system.

Simply insert DragonFly into your computer's USB port, then plug your favorite headphones into DragonFly's minijack, or use one of our versatile Bridges & Falls analog interconnects to connect DragonFly to powered desktop speakers or an amplifier or receiver. Whether you're on the go or at home, exploring one (or *many*) of the exciting new streaming music services, listening to convenient MP3s or high-resolution (up to 24-bit/96kHz) downloads, DragonFly reveals all the color, detail, and emotion that brings life to your favorite music, YouTube videos, movies, and games.

Partner DragonFly with NightHawk for an especially satisfying, emotionally compelling listening experience.



Headphone Specifications

Impedance: 25 ohms

Sensitivity: 100dB SPL / mW

Power Handling: 1.5W

Driver: 50mm Dynamic | Biocellulose Diaphragm | 1.2T Split-Gap Motor

Weight: 346g

Cable Specifications

Length: 8' (2.4m)

Conductors: Perfect-Surface Copper+ (PSC+)

Geometry: Symmetric Star-Quad

Dielectric: Foamed-Polyethylene

NDS: Carbon-Based Noise-Dissipation System

Terminations: 3.5mm Stereo → Dual 2.5mm Mono | Direct-Silver Plated Pure Red Copper

Honoring Outstanding Design & Engineering

NightHawk has been named a 2015 CES Innovation Awards Honoree (Headphones) and 2015 Best of Innovation Winner (Eco-Design and Sustainable Technologies), reflecting AudioQuest's firm belief that outstanding performance and extraordinary value can be reliably achieved through thoughtful, intelligent design.



A Note from the Designer

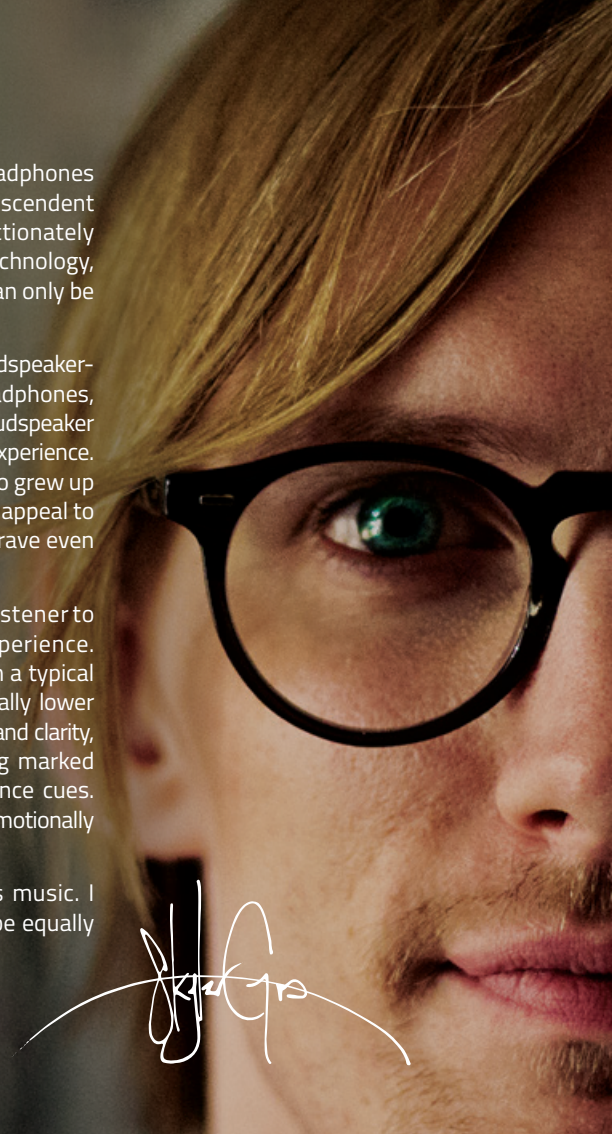
The act of listening to music through headphones should be a singularly intimate and transcendent experience. Though in my designs I affectionately borrow from the world of loudspeaker technology, my quest is to deliver an experience that can only be achieved through headphones.

Rather than attempting to recreate the loudspeaker-listening experience through a set of headphones, I've judiciously incorporated elements of loudspeaker design that honor the *headphone*-listening experience. NightHawk is for all those music lovers who grew up listening to headphones, but it should also appeal to traditional loudspeaker enthusiasts who crave even deeper immersion in their music.

High-end headphones should allow the listener to become absolutely consumed by the experience. Compared to the sound of loudspeakers in a typical room, headphones can provide a dramatically lower noise floor resulting in unprecedented detail and clarity, significantly lower distortion, and imaging marked by exceptionally clear and present ambience cues. The result is a listening experience that is emotionally compelling and *seriously* immersive.

Nothing brings me as much pleasure as music. I sincerely aspire to help you, the listener, be equally moved by its beauty.

—Skylar Gray, NightHawk Designer/Engineer



The technology in NightHawk is protected
by one or more of the following patents
or patents-pending:

US # 7,039,213
US Application # 61/888,392
US Application # 62/077,825

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