

Safran Seats introduces innovative headset-free sound

This is a special feature from *PAX Tech*'s 2023 [April/May Seating & IFEC issue](#) on [page 12](#).



Euphony, the collaborative result between Safran and Devialet, provides a headset-free sound solution for seats in Business and First Class

Headphones have become an essential accessory for travelling passengers, especially on long-haul flights. Passengers onboard are often using headphones to connect to the inflight entertainment system — sometimes for 15 hours or longer. By mid-flight, many cabins are a tangle of headphone cords, charging cables and other restrictive wiring as passengers seek to entertain themselves and stay connected. While some headphones are connected via Bluetooth, most headsets provided by airlines must be plugged into the seatback IFE system via a wire.

[Harvard Health Publishing](#) (HHP), the consumer health education division of Harvard Medical School, [advises that wearing headphones](#) for an extended period can be uncomfortable and even painful.

HHP says, “Ultimately, personal listening devices should be comfortable to the listener.”

[Safran Seats](#) is aiming to resolve this issue for passengers onboard. “Our user experience studies have consistently shown for a number of years that headphones often create a number of pain points at various stages of the flight. Physical fatigue on and around ears, difficulties to communicate with cabin crew and other passengers, wires getting in the way when using the airline headphones or battery planning when bringing personal headphones,” Arthur Glain, Advanced Concept Manager at Safran, tells *PAX Tech*.



Arthur Glain, Advanced Concept Manager at Safran

In an ideal world, we would all rather be able to listen to our content the way we do at home, with no intrusive hardware, wirelessly and with the ability to communicate with close-by individuals.”

Safran Seats introduced its award-winning Euphony at last year’s [Aircraft Interior’s Expo](#) (AIX) as the solution to these longstanding challenges of inflight headphone use.

The Euphony solution for seats in Business and First Class is a “headset-free,” high-quality individual sound experience developed in partnership with acoustic engineering company [Devialet](#). The result of nearly four years development, the speakers are built into the headrest, delivering high-fidelity audio to each individual passenger while ensuring other passengers in the cabin are undisturbed.

Euphony is based upon Devialet’s unique patented acoustic technologies and acoustic tuning expertise, coupled with Safran Seats’ innovation consisting of two Devialet bespoke loudspeakers on each side of a standard-sized headrest. Together, it provides the passenger with a clear and full-bodied sound.

“Concisely and without disclosing too much detail, we can say that thanks to patented algorithms, Euphony dynamically adjusts the audio output based on an array of factors making for a truly

seamless experience,” Glain tells *PAX Tech*. The audio output volume adjusts automatically to the wing positions, as well as the fluctuation of the cabin noise environment and flight phases preventing any sound leaking to disturb other surrounding passengers.

Unlike headphones, Euphony does not cover the passenger’s ears, isolating them from any announcements made over the cabin PA. During an announcement, the IFE system pauses any ongoing media, and the passenger is free to hear any announcements directly via the cabin PA. This ensures passengers remain informed and aware of all announcements.

“It is not rocket science to install a pair of loudspeakers in a headrest. However, providing high fidelity audio at an audible level without disturbing any surrounding passenger proved a sizable challenge,” Glain says.

Several acoustic engineering companies were considered before Devialet’s proof of concept convinced Safran Seats. With experience working in diverse and sometimes very demanding environments, Devialet meets the challenges of a low frequency-saturated cabin interior coupled with close proximity between users.

“We needed a partner able to come up with the right hardware but most importantly with the right digital signal processing, and this is what Devialet is all about, a tech company creating advanced algorithms to perfectly compensate any environment while delivering top tier quality audio,” says Glain.

Good news for audiophiles. While today’s aircraft cabins are less noisy than their predecessors, being able to dampen the noise of the aircraft engines or air flow through noise-cancelling technology is a significant achievement.

With Euphony already available across all Safran Business and First Class portfolio, does this mean an end to headphones and the common and inconvenient phenomenon of tangled and twisted cables? Not really, admits Glain. “To be perfectly clear, we do not pretend to completely replace headphones with Euphony. Euphony does a fantastic job at allowing passengers to watch movies or listen to audio content with much more freedom,” he states.

Janus Label of Excellence

Underlining Safran’s innovative efforts, the jury at the Institut Français du Design awarded its [Janus Label of Excellence](#) to Euphony in January of this year.

Reacting to the announcement in a January 26 press release, Victoria Foy, Safran Seats CEO said, “This award highlights the excellence of the engineering teams at Safran Seats and is a strong reflection of our capacity for innovation on behalf of our customers and the passenger experience.”

Euphony has also been shortlisted for the Cabin Design — Concept Award in The International Yacht & Aviation Awards 2023, with the winners to be announced on June 9 in Venice.