

GENELEC®

CASE STUDY

**Learning to
listen through
contemporary art**

GENELEC MONITORS
BRING IMMERSIVE AUDIO
TO BOTH SIDES OF THE
CANVAS AT THE PHI
CENTRE IN MONTREAL



Phil Rochefort, Creative Sound Supervisor at the PHI Centre



A RANGE OF GENELEC MONITORS IS RE-ENGAGING PEOPLE WITH THE WORLD AROUND THEM AND INTRODUCING ARTISTS TO NEW POSSIBILITIES



Since the very first recordings were produced, our relationship with recorded sound has remained largely unchanged. When we listen to recorded sound, we are separated from it, but in real life we don't experience sound in this way; sound happens all around us, adding context and connection to our environment. Immersive audio promises the same experience for recorded

sound, but as the [PHI Centre](#) in Montreal discovered following the creation of its new public immersive space, Habitat Sonore, and studio, it has to be experienced for people to fully appreciate the power of being connected to their surroundings. And the same goes for sound designers and artists, as well as for visitors.

Founded in 2012, the PHI Centre is dedicated to innovation at the frontiers of creative

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production and fosters the design, development, production, and presentation of a wide variety of disciplines and forms, with an emphasis on digital technologies and new media. It also has a commitment to present local artists, so when it started to explore how immersive audio could provide new experiences in its public space, it was important to look at how to create those immersive experiences via its studio.

“PHI is made up of three distinct entities,” explains Phil Rochefort, the Creative Sound Supervisor who was responsible for the design and build

of both environments. “The PHI Foundation for Contemporary Art is a non-profit organisation dedicated to bringing impactful contemporary art experiences to the public which caters for a variety of free exhibitions. Meanwhile, the PHI Centre hosts concerts and exhibitions in VR, AR, MR and mixed media. PHI Studio has developed a reputation as an incubator for talent at the vanguard and as a catalyst for the conception and implementation of immersive multidisciplinary projects. Our aim is to encourage access to the arts across a variety of mediums. We take a very pluralistic approach to it all.”



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Designed around sixteen [8020](#) monitors and known as Habitat Sonore, the public listening environment in the PHI Centre was created first. It is a flexible multichannel environment which the PHI Centre says enables the “playback of several commercial immersive formats and can also be used as an ‘instrument’ for artists to explore spatialisation possibilities. Habitat Sonore is a place that offers multiple creative opportunities for collaboration, meditation and experimentation.”

As a soundproofed and acoustically treated space, Rochefort describes Habitat Sonore as

like entering a cocoon of sound. With no visuals to distract visitors, the space engages people in unexpected ways. “There aren’t many public listening spaces like this in North America,” he says. “We designed the room to be flexible enough to play commercial renders as well as allow artists to mix in the room directly. When most people listen to music in their day to day lives, they are not necessarily engaged. Habitat Sonore is about helping adapt the public to their environment; it is not so much about objects as it is about re-engaging people’s sense of hearing and how they listen.”



With public momentum building for immersive content in the public space, Rochefort's attention turned to the studio. Designed as a traditional tracking studio when the building first opened 10 years ago, Rochefort wanted the space to work much harder. The studio now serves as both a commercial entity as well as a laboratory to adapt works to tell different stories.

"There's a lot you can do in the studio to help prototype and explore the creative possibilities of the work we were already doing in VR and AR development, and we weren't getting it with the existing studio," he explains. "In addition, Montreal has a very active new media scene and we also wanted to give those artists a space to come and work. A lot of them work in immersive audio and they need places to test stuff out. So we created an ecosystem which caters for both needs."

Based around Genelec Smart Active Monitors, the 7.1.4 studio uses seven [8341](#) coaxial three-way monitors in the front and surround positions, four [8330](#) two-ways for the height channels, and a pair of [7360](#) subwoofers. Crucially, [GLM software](#) pulled everything together.

"Genelec was already our speaker of choice, but when I demoed the 8341s in the studio they were unlike anything I had heard before," says Rochefort. "For an immersive setup you need perfectly time-aligned imaging and real precision, and the studio was never designed as an immersive room. Having the GLM software to correct those challenges in such a difficult space proved invaluable."

"GLM takes all the guesswork out of time alignment, which is critical for Atmos. I do A/B tests all the time, and the difference is night and day," he continues. "I basically always have GLM turned on. I love it!"

Rochefort isn't the only one taking advantage. In the same way as visitors are re-engaging their connection to sound in the PHI Centre, Rochefort says the Studio is providing a stronger creative connection to the work which is produced there.

"It is fascinating to see how artists who have never experienced immersive environments push the boundaries of it. Most of the artists we work with love how it allows you to collapse or expand the space or use it to introduce tension and surprise. I'll lay out their music and start throwing stuff around the room, and suddenly you can see them engaging with it and exploring different possibilities. Immersive audio presents another dimension to their creative process beyond just making a good sounding recording; it can turn a good recording into an experience."

The added value of transferring that directly to the public in the Habitat Sonore means that the PHI Centre is delivering on its mandate to break the preconceptions about what contemporary art is and who it is for, and it is doing so on both sides of the canvas.

THE KIT

Phi Centre Habitat Sonore

- 16 x 8020C

Phi Centre Sound Studio

- 7 x 8341A
- 4 x 8330A
- 2 x 7360A
- 1 x GLM Calibration Software

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