Based on years of MRI neuro-audio research and analysis, GenAudio (http://www.genaudioinc.com) has created a highly accurate and true-to-life 3D audio digital filter technology called AstoundSound®. The filters derived for AstoundSound® are quite different from typical HRTFs (Head-Related Transfer Functions): these new filters model how the human brain perceives sound in space as opposed to HRTFs that only model the anatomy of the ear. As a result, we call our proprietary filters BRTFs (Brain-Related Transfer Functions.)
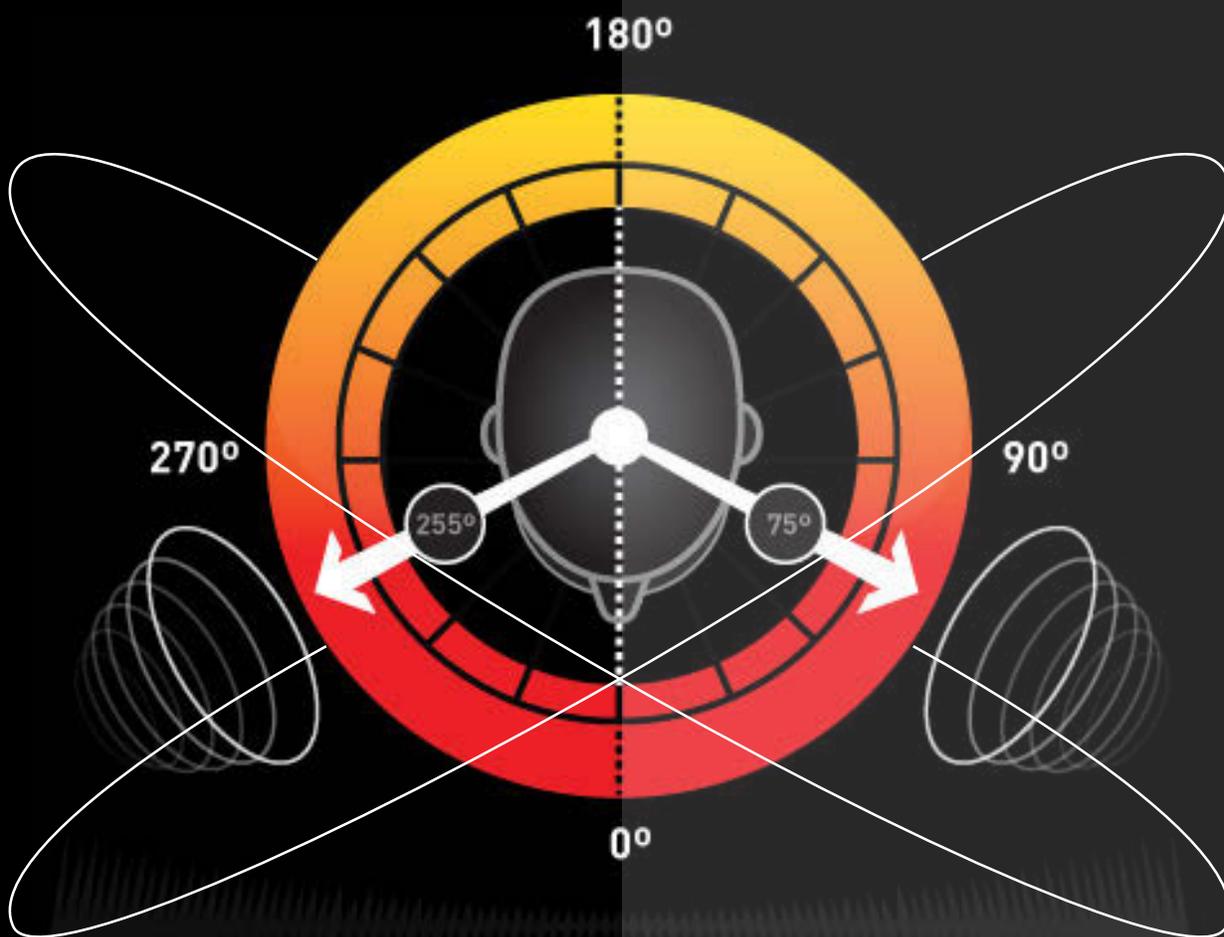
Speakers   Headphones

The AstoundSound® software technology significantly enhances the gaming listening experience unlike anything else available on the market today. All that is required is a stereo output to enjoy AstoundSound -- using any set of speakers or headphones.

GenAudio, Inc. introduces three new 3d audio spatialization plugins for Audiokinetic Wwise:

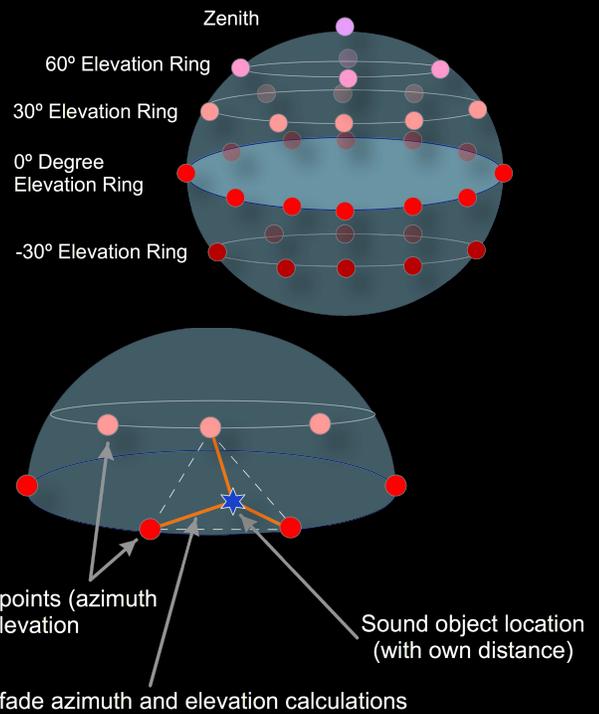*AstoundSound® 3D RTI: Mono to stereo processor*

AstoundSound® 3D Real-Time Interface (RTI) Plugin is a member of the AstoundSound® product-line that transforms any discrete mono audio input into a highly accurate 3D, spherical, audio experience, using only a 2-channel stereo output. The AstoundSound® 3D RTI Plugin intercepts the XYZ position of any sound emitter in game and in real-time produces a spherical sound-field. This enables users of any game that uses the plugin to be able to experience an immersive, 360º sound field, with elevation, bringing unprecedented 3D audio (distance perception) to mainstream gaming, enabling players to experience game audio like never before.

AstoundSound® Fold-down: 5.1 to stereo processor

The AstoundSound Fold-down is a plugin derived from the general AstoundSound DSP technology. AstoundSound Fold-down Plugin transforms discrete 5.1 audio input into a highly accurate virtual surround audio experience, from only a 2-channel stereo output. The AstoundSound Fold-down Plugin can be instantiated on the master 5.1 output of the game's sound engine thereby enabling any game that uses the plugin to be able to experience a surround sound experience over any set of stereo headphones or speakers.

AstoundSound® Expander: Stereo expansion and enhancement processor

The AstoundSound Expander is a plugin derived from the general AstoundSound DSP technology. Expander works by literally expanding the stereo signal by virtually placing the left and right stereo sound sources (speakers). This provides the listener with an enhanced super-wide stereo effect out of any 2-channel stereo output. The AstoundSound Expander is superior to other stereo widening algorithms in the market today because it does not rely on phase manipulation to achieve expansion, thereby creating a much better and pleasing sound comparatively and allows for an enhanced stereo experience over any set of stereo headphones or speakers (i.e. great for games on mobile devices since they are typically limited to stereo output.)

Zenith
60º Elevation Ring
30º Elevation Ring
0º Degree Elevation Ring
-30º Elevation Ring

Filter points (azimuth and elevation)
Sound object location (with own distance)
Crossfade azimuth and elevation calculations

Key features of plugins:

-- Precision 3D audio spatialization using XYZ coordinates of game sound objects (RTI)

-- Allows gamers to experience unprecedented 3D spatial audio using any stereo output during gameplay

-- Easy integration into game audio engines using a plugin architecture – simply turn it on
Scalable for different gaming platforms, from mobile, consoles, to high-end gaming PCs

-- Flexible business model: B2B licensing available as a per title, per platform license or as a B2C In-App Purchase 'upgrade' direct to consumers

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