

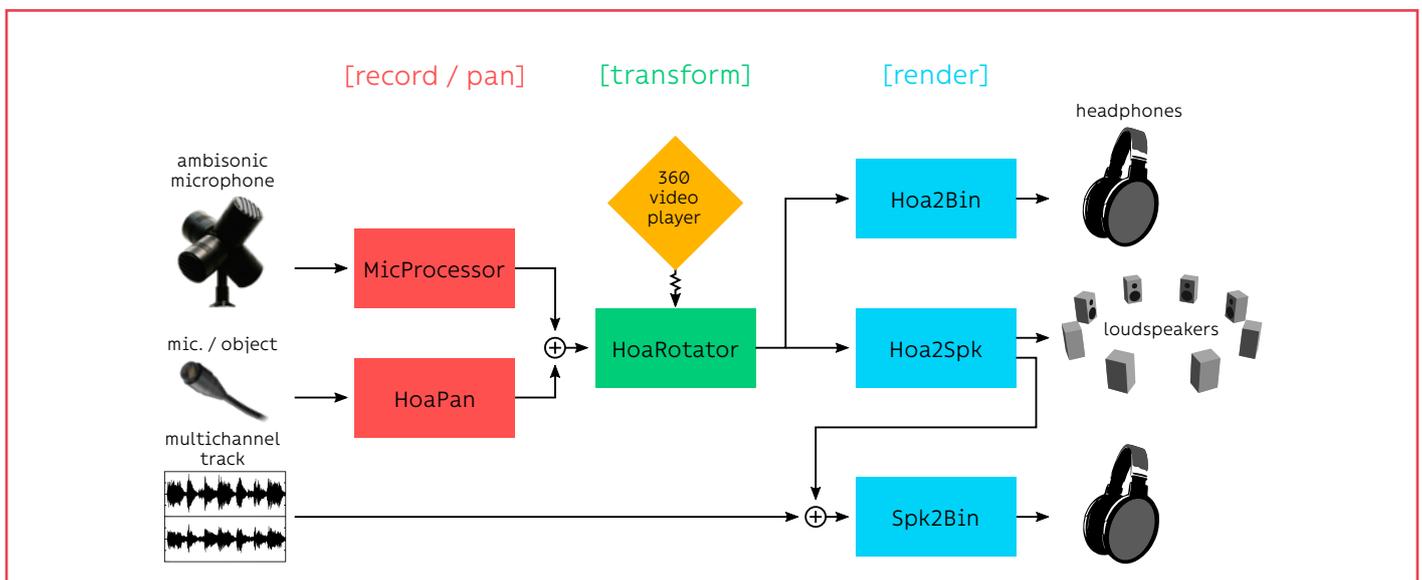
A pack for immersive audio rendering

The desire for and strong interest in immersive experiences is probably the entertainment industry's most obvious trend in recent years.

In this context, audio has a major role to play and new techniques like ambisonics, object-based, head-tracking and binauralization make a significant contribution to its immersiveness potential.



{applications} :



b<>com introduces a set of audio plugins enabling the creation of truly immersive contents and experiences. Relying on the Higher Order Ambisonics (HOA) technology, the *Spatial Audio Toolbox* plugins provide a complete workflow, from capture to rendering on headphones or multi-loudspeaker setups. HOA makes it easy to play back complex sound scenes binaurally with head-tracking and it has now become the audio technology of choice for the growing areas of Virtual and Augmented Reality.

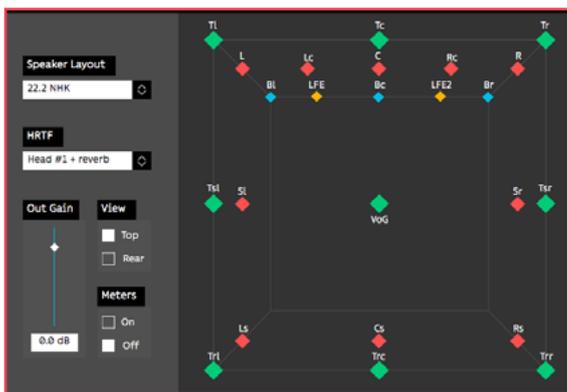
{key features} :

- ♦ Binaural virtual loudspeakers
- ♦ Standard VST3 or AAX plugin
- ♦ Database of HRTFs
- ♦ Anechoic and reverberated HRTFs
- ♦ Up to 32-channel input
- ♦ Click to Solo
- ♦ User-friendly and intuitive GUI

{benefits} :

- ♦ Listen to your 3D audio mix over standard headphones
- ♦ Work with your favorite DAW
- ♦ Choose the filters that best fit your ears
- ♦ Choose your virtual environment
- ♦ Work with all major 2D and 3D audio formats
- ♦ Easily monitor each speaker channel
- ♦ Start creating immediately

The [Render plugins] pack is composed of three different plugins :



The [Render Spk2Bin] plugin renders channel-based 3d audio over headphones, using a virtual loudspeaker approach. It includes a database of Head Related Transfer Functions (HRTFs) for converting major 2D and 3D audio formats (22.2...) to binaural audio. Each channel can be selected individually for fast monitoring of complex setups. In addition, the plugin includes reverberated HRTFs, which add a realistic room effect and improve externalization.



The [Render Hoa2Spk] plugin can be inserted in a DAW as a spatial effect with 4, 9, 16, or 25 inputs and 32 output channels. The input is a Higher Order Ambisonics signal up to order 4, using the ACN/SN3D (ambiX) convention. The output is a multichannel signal adapted to the selected loudspeaker layout. Several output loudspeaker layouts are supported, ranging from stereo to 30.2.



The [Render Hoa2Bin] plugin can be inserted in a DAW as a spatial effect with 4, 9, 16, or 25 inputs and 2 output channels. The input is a Higher Order Ambisonics signal up to order 4, using the ACN/SN3D (ambiX) convention. The output is a binaural signal for headphones. Several HRTF sets can be selected, with or without reverberation.

{specifications}

[Render Spk2Bin]

Audio inputs

2D and 3D audio formats (mono, stereo, 5.1, 7.1, etc.) from 1 to 32 channels

Audio outputs

Binaural (2.0)

Additional effects

HRTF filters including reverberation

[Render Hoa2Spk]

Audio inputs

HOA from order 1 to 4 * (from 4 to 25 channels) using the ACN/SN3D (ambiX) convention

* the HOA order may be constrained by the DAW capabilities (number of tracks per bus)

Audio outputs

2D and 3D audio formats (mono, stereo, 5.1, 7.1 etc.) from 1 to 32 channels

[Render Hoa2Bin]

Audio inputs

HOA from order 1 to 4 * (from 4 to 25 channels) using the ACN/SN3D (ambiX) convention

* the HOA order may be constrained by the DAW capabilities (number of tracks per bus)

Audio outputs

Binaural (2.0)

Additional effects

HRTF filters including reverberation

Applicable to all 3 plugins

Type of plugin

- VST3 and AAX

Sampling frequency

44.1 kHz, 48 kHz, 96 kHz, 192 kHz

License Management

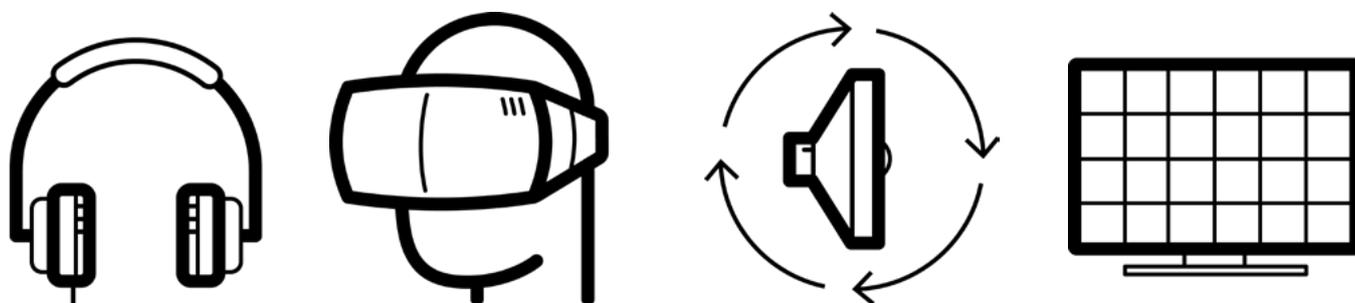
- One software license per seat (no hardware dongle) for the 3 plugins

Platform requirements

- Plugin for Mac OS X (10.6 or later) and Windows (7 or later, 64-bit or 32-bit)

Graphical User Interface

- User interface designed for a minimum screen resolution of 1024 x 768
- two 2D-views (from above or rear) for the [Render Spk2Bin] and [Render Hoa2Spk] plugins

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35510 Cesson Sévigné (FR)**{about b com} :**

With its innovations, the Institute of Research and Technology (IRT) b-com is taking part in the European digital transformation. Its 230 researchers develop tools, products, and services that make everyday life easier. They focus on three fields of research:

- Hypermedia (ultra-high definition images, 3D sound, smart content, virtual and augmented reality)

- More agile ultra-high speed networks (cloud, cybersecurity, ultra-high speed mobile, network resilience, Internet of Things).
- e-Health (image sharing, augmented reality, surgical workflow)

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