Indoor

The five page manual

Introduction

Indoor is a convolution reverb plug-in for Mac OS X and Windows Digital Audio Workstations meant for audio post production for film and video. In Pro Tools It outputs surround up to 9 channel Dolby Atmos configurations. In VST Indoor outputs a maximum of 7 channels.

A convolution reverb adds acoustics to dry recordings to make them sound as if they are somewhere else. Those acoustics have been sampled in the real world and, in convolution reverb lingo, are often referred to as Impulse Responses, or IRs.

Indoor packs over a thousand of these impulse responses, made in 60 rooms, in 10 locations, most of them domestic interiors, but also a restaurant, an auto workshop and three vehicle interiors: a yacht, a car and a recreational vehicle. The locations have been carefully selected to cover all day to day needs for audio-post.

To this, many features have been added that meet the main requirements for post: great sound, reliability, no clicks, lightweight, and swift and clear usage.

Basic operation

Select a location from the top-left location popup and its 3D image appears on the right. The floors of the 3D images are dotted with square and egg-shaped areas. Clicking on a square will move the speaker there, clicking on an egg will move the microphone there. Hovering in between spots brings up a dotted line that shows where both the speaker and mic will be moved to when you would click.

Doors can be opened or closed by clicking on them. Each combination of positions and doors that you can set up has been recorded as a separate impulse response.

Direct on mode - Rotation

Indoor sounds most like reality in **Direct On** mode, with the **Angle section** set to **recorded angle** and **level range** set to **natural**.

Then, what you see is what you hear. If the speaker is to the right of the microphone than that is what you'll hear. If you close a door or move the speaker closer it gets louder. **Direct on** mode allows for natural mixes of studio recorded (preferably dry) foley and dialogue. Using a couple of **Indoors** you could set up a realistic mix of a conversation in a hallway while in the background you hear pots and pans from the kitchen, showering from the bathroom the TV from the living and even traffic from outside.

Angle Section set to Custom Rotation

The (surround) microphone can now be turned, although this is instead offered as rotating the speaker around it. (When you turn a camera to the left, the objects in the picture move to the right. It is the same here. We chose for you to move the object, or actually the entire world, rather than turn the microphone) When you leave the speaker in a spot it will remain sounding form there even as you switch to another room. That is how you can force all impulse responses to sound from center-front

Angle Section set to Recorded Angle

The speaker will snap to the position it had during the actual recording. You can not alter its angle.

Level Range

All impulse responses have been recorded using a single mic pre-amp gain setting, so all natural levels have been preserved. When **Level Range** knob is set to natural you hear these naturally occurring level differences. Turning down **Level range** decreases the natural level differences.

Direct off mode - pan following reverb

Without direct sound you hear only early reflections and tail. The position of the sound becomes vague. **Direct Off** mode offers more control but sounds less real. It is intended to be mixed with your dry sound. Select **Direct Off** mode, and the **Angle section** is replaced by **Spread, Wet/Dry** and **Pre-Delay** knobs. **Direct Off** mode is most useful when inserted in a N to N channel aux bus, like a 5.0 input 5.0 output bus. This allows you to pan your mono and stereo sounds into the input of *Indoor*. You can then use the Spread button to localize the reverb around the panned sources rather than make it appear everywhere, like in the next example.

Spread

Spread can best be explained using the following example.

If you have a stereo recording of footsteps walking from left to right and you send that to an Indoor with a stereo input then you can have the reverb walk along with the footsteps by turning down (narrowing) spread. It creates a cloud of reverb around the panning position of each input sound, even when it moves. The cloud can be narrow or wide by adjusting **Spread**. **Spread** is a.o. useful to better associate reverbs of sounds with the original positions of those sounds, in order to prevent possible distraction when the reverb of a sound seems to come from other positions than the sound itself.
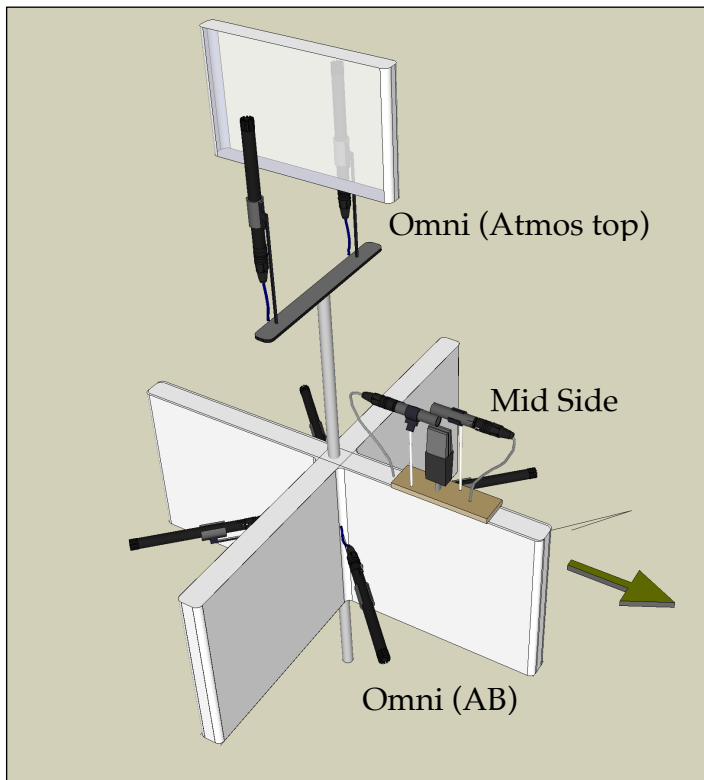
Wet/Dry

Wet/Dry can dial a bit of the input sound into the mix.

Pre-delay

Pre-delay delays all reverb channels by the same mount.

Microphone (Mic) System

All Impulse responses have been recorded using the same nine-microphone rig. There are two quad surround systems, one comprised of four DPA 4006 omnidirectional microphones spaced by baffles. We (wrongly) call this the AB system.

The other one is a front and rear facing Mid-Side system using Neumann KM 184 cardioids for Mids and an AKG 414 Figure of 8 as Side. This is the MS system.

The systems can be complemented by two more baffle-spaced omnis for ceiling channel use (Dolby Atmos).
The two main systems can be combined to create 5 or 7 output channel systems. Add the tops and you get the maximum configuration of 7.0 + Dolby Atmos Ceiling (top) channels.

When you select a system using the *Mic System* selector., You select the corner channels Left Right Left Rear Surround and Right Rear surround.Any Side Surround and center channels are then picked from the other system.

Click free

Much effort had gone into making impulse response switches reliable zipper- and click-free. Not only for changing positions of microphone or speaker, but also for rotating using the *Angle Section*.

AAX DSP versus AAX Native

A part of each AAX Indoor can run on a Pro Tools HDX DSP chip if available. This is supported for 44.1 end 48 kHz sampling rates and up to 5 channels of output. 3 mono to stereo Indoors can run on a single chip. Total latency of the DSP version is 1.3 msec at 48 kHz, or 65 samples.

Not to be overlooked:

- You can resize the interface using the resize arrows in the top right corner of Indoor.

- By clicking on the indoor logo you bring up the about box in which you can turn off the on-line update check.

- If you click on the burger column in the restaurant the audio will hop into ceiling mounted speakers throughout the restaurant.

- If you click on the radio in the SUV or the dashboard speaker in the RV your audio will play through their radio systems

- If you click on the TV in the Hotel Room your audio will play through it.