



DRIVING PERFECTION



Wisdom Audio's unique speaker design proposition is custom made for CI says International Sales Manager Barry Pim

Rapid technological advance has gifted your business with the power to deliver astonishing performance and intuitive ease of use to your customers. But amid the dazzling science of the metaverse, AI, M2M comms and IoT, a technology you install every day has remained virtually unchanged from the moment it was patented on 2nd April 1929.

Loaded into on-wall, in-wall and freestanding cabinets, headphones, even buds, Kellogg and Rice's 'dynamic moving coil' loudspeaker has been making waves ever since. For most applications it sounds just great, but for a more tenacious breed of high-end speaker engineer, not great

enough. In answer to the question "can we do better?", Wisdom Audio's design team has refined the 'Planar Magnetic Driver', or PMD, to become the epitome of ultra-discreet high performance transducers: the perfect choice, in fact, for elite screening rooms, home cinema and media rooms.

A thin film of radiating goodness

This is because PMD tech hands you the means to integrate extraordinary sound for your best customers. By chemically bonding the voice coil track to a thin-film diaphragm of polyimide within the field of tiny rare-earth neodymium magnets, Wisdom's proprietary PMD design combines the virtues of electrostatic drivers and ribbons (detail, low distortion), with the strengths of dynamic speakers (high reliability, power handling, dynamic range and sensitivity). In other words, Wisdom's magical PMD has transformed the capabilities of traditional driver design, and when deployed in a tall column speaker, it's also able to generate the fabled qualities of Line Source design.

Line Source v Point Source

Most speakers in the world are Point Sources, whose sound expands away from the speaker as an ever-enlarging sphere. This happens because the vibrating diaphragm is small compared to the sound waves it is producing. Sound from a Point Source reflects back into the space from room boundaries so that delayed versions of the original signal collide with the direct sound at the listening position.

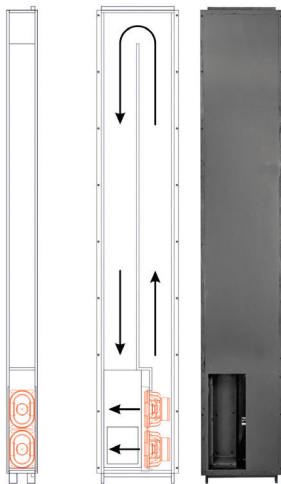
Line source speakers make everything simpler. The physics says that when a vibrating diaphragm approaches the size of the sound wave it is producing, its output becomes more directional, radiating away from the source like a tide, rather than a 3D spray of frequencies. Aided by this focus, Line Sources deliver half the propagation loss of conventional Point Sources and a generous 'sweet-spot' of level and frequencies. Best of all, their vertically controlled dispersion reduces floor and ceiling reflections, so the audience hears more speaker and less room.

Is Line Source the same as Line Array?

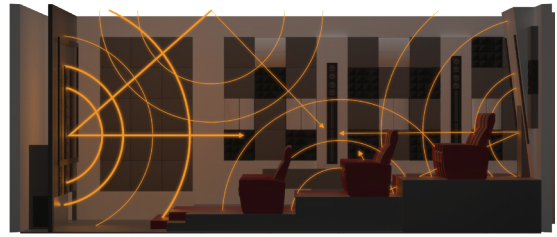
Some of the messaging available has blurred the distinction between Line Source and Line Array, but they are not the same. Being tall and thin, a Line Array may look like a Line Source, but rather than use a limited number of large wideband drivers, Line Arrays squeeze multiple Point Source speakers into a column (like the PA at a festival). By virtue of its size and shape, a Line Array tries to mimic the dispersion of a Line Source, but instead multiplies the distortion caused by many Point Source speakers interacting with each other and room boundaries. Line Array towers may be a great solution in free air within large commercial venues, but within an enclosed space such as a cinema room, it's an altogether different story.

Space Craft

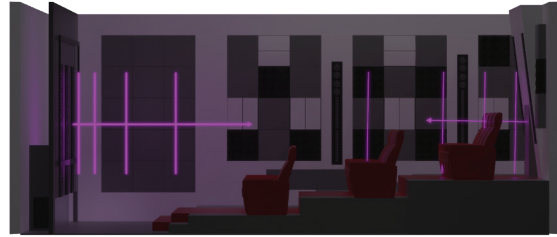
So why isn't every speaker made for Line Source dispersion? Two big reasons: technical complexity and practicality. It would be impossible even for a high-end brand comfortable with moving-coil drivers or maybe AMT ribbons to attempt the leap of invention necessary to devise a driver as capable as Wisdom's large scale PMD. And to target its benefits where they matter most - above 160Hz - Wisdom's Line Source speakers are tall, around 2m, making in-wall, on-wall, and free-standing versions a natural fit for larger home environments, but sometimes impractical for smaller rooms. For these, Wisdom Audio deploys matching, tonally accurate PMD tech within twenty-six Point Source speakers for in-wall, on-wall, in-ceiling, LCR and free-standing applications. Even better, being predominantly flat and thin, our technology is perfect for the flush installation so beloved by CI. As a custom cinema designer, you can take it to the bank!



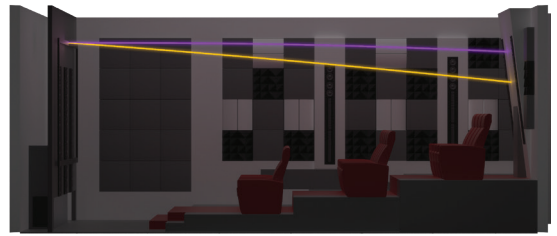
Wisdom's Regenerative transmission Line (RTL) tech can generate 123dB at 20Hz from the twin 5x7-inch drivers inside the super-thin S90i in-wall design



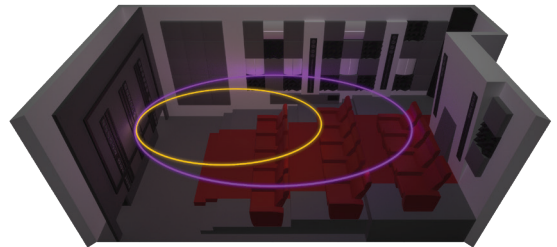
Point of confusion: Point Source propagates in all directions providing more reflected sound v directed sound.



Line of clarity: Line Source propagates in a controlled vertical fashion, providing more direct v reflected sound.



Power over distance: Line Sources have half the propagation loss of Point Sources, providing a better row to row consistency.



A shared experience: Line Source provides a wider sweet spot.

The Deep

You'll love our bass as well. Wisdom's Regenerative Transmission Line (RTL)[®] subwoofer technology uses the acoustic output of both sides of the woofer diaphragm to drive the same internal transmission line. In effect the operation sums three acoustic outputs, boosting efficiency and maximum output. This means that RTL can generate, for example, 123dB at 20Hz from twin 5x7-inch drivers within the impossibly thin (15.5cm) S90i in-wall design. Astonishing but demonstrable. As the old proverb goes, the proof is in the pudding...

The Power to Communicate

And that's exactly what I'd love you to do. Try the pudding. No other speaker brand offers you quite as much versatility and performance, custom made for the complete CI playbook. It's a giant leap in capability for loudspeaker technology, but in this age of dazzling science, you'll take that in your stride!

Meet Habitech at Basingstoke for the complete Wisdom Audio experience.

sales@habitech.co.uk



WISDOM[®]