



POINT AND CLICK

The new generation of point source for live music is network-ready, finds Phil Ward . . .

PLASA Focus Leeds steam-lifted its usual Yorkshire pudding of themes, but this year point source loudspeakers got all the gravy. It reveals some new thinking about their deployment, with special attention being paid to the reproduction of live music on a smaller scale - whether through standalone FOH systems or as in-fills for a bigger picture.

The rising demand for digital control, including - but not exclusively - spatial audio processing, has made the attachment of electronics favourable in one form or another, either with active versions becoming available or with new amplifier platforms that combine DSP even among some brands that have not previously made this a priority. Word on the street is that this classic loudspeaker configuration is as important as it ever was and, in many quarters, the outright favourite.

At the same time, other brands survey processing trends with some scepticism and keep it at arm's length. In no particular order, let's take a look at a selection of point source innovations from leading brands well known to high-end music production and find out why - as they all say - theirs is the best . . .

D&B AUDIOTECHNIK

The new U-Series is described in-house as "application-neutral", meaning mobile or installation, but will have more to say about live music than announcements. It's targeted at modest gatherings but equally brings all of d&b's expertise in "controlling directivity, on and off axis, with great accuracy," according to product manager Santiago Alcalá Baillie. So, it has more of the flagship magic than ever before at this level and happily takes its place in the battery of outputs available to d&b Soundscape applications. "Regardless of the size of the

audience," Alcalá adds, "having such directivity control allows for more accurate localisation of the sound objects and a better understanding of the overlap between coverage areas."

As spatial audio scales down, this is the type of box that will respond to the demand. "Even more than that," continues Alcalá, "we foresee that as immersive audio processing becomes more powerful *and* more accessible, its applications that use small left-right line arrays today will shift to arrangements of point sources for the exact same uses in smaller theatres. Overall, the systems will not grow, but there will be smaller systems with a larger number of smaller sound sources."

This is partly to do with economics, says Alcalá, and partly an opportunity provided by d&b's En-Scene object-based positioning software module. "With En-Scene," he explains, "you can configure maybe five medium-size point sources and actually get a better stereophonic image to a greater part of the audience. It will popularise the format even without any need for 360° immersivity."

Traditional gigs and concerts are more likely to look at this than the kind of walk-through 'experiences' of the museum or gallery, although the U-Series would work just as well here too. For live music, while satisfying all of d&b's criteria for directivity control and HF dispersion, U-Series is said to provide 'system architecture freedom', meaning passive and active options. The network variant has a DSP and amplification module with AC and PoE++ operability and a choice of analogue or Milan input, providing single-cable ergonomics. "This makes immersive configurations more affordable for either fixed installation or touring," says Alcalá. "The synergy is with the discrete channels



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- Santiago Alcalá Baillie (d&b)

- ← Facing page: Funktion-One's Evo 2
- ↑ d&b audiotechnik's U-Series passive and networked loudspeakers
- The P-Series from Outline

of spatial audio and the distribution of each single sound source, while making it easier and more cost-effective to deploy more loudspeakers in the same venue. And the only difference is the connector plate: electro-acoustically, the performance is exactly the same as the passive version."

OUTLINE

The passive P-Series has already been used as a FOH system by James Lawford, live sound channel manager at Outline UK distributor CUK Audio, who describes it as a major step forward in sound reproduction, aesthetics and ease of deployment. As point source is usually closer to the audience, he relates that Outline has "steered clear of the usual black box look and given it some Italian flair." The new colour is called 'solar gris' and there's a unique micro-weave pattern to the grille.

"As well as looking distinguished," Lawford says, "it means 25% less surface area in front of the transducers, and I've measured the P8 with and without the grille and there's no difference. You don't have to apply any processing to lift the HF, for example."

As well as integral handles, most of the range can double as wedge monitors, as required, thanks to the versatile cabinet shape - and operate as low-profile front-fills with the same alacrity. Proper dovetail joints are used, too, as opposed to metal brackets, and are applied to industry-standard Baltic birch ply. "Some competitors may have reduced from 15mm to 12mm plywood," continues Lawford, "but not Outline. In fact, the wood shop has been seriously upgraded. The cabinet should always be as rigid and stable as possible so you're only moving air and not the wood, which can impart frequencies to the output."



"For many applications a well-designed point source loudspeaker still offers the most direct route to practical deployment, coherent coverage and exceptional audio quality . . ."

- Tony Andrews (Funktion-One)



↑ EM Acoustics' Reference Series

Driver assembly is coaxial, with components drawn from an exacting selection of suppliers. "Outline has used computer modelling to re-examine the bass ports," details Lawford, "and the upgraded flares produce a much smoother LF that goes deeper and rolls off beautifully. The new presets pay special attention to the phase slope at these low frequencies, too, so that the different sizes of cabinet in the range all match - making a coherent sum right across a variegated FOH system."

EM ACOUSTICS

The Reference Series is aptly named, especially given the company's bold and confident assertion that it forms a *de facto* reference point for the whole industry. And not that much has changed recently, because - in the words of brand manager Greg Clarke - "the driver technology is extremely stable". It comes from the highly respected B&C Speakers based near Florence, in collaboration with EM Acoustics co-founder Ed Kinsella, who visits the factory regularly.

The design of the cabinets is similarly established, including the recently released R4 that, according to Clarke, was developed rapidly for *Oliver!* in the West End as an ultimately discreet under-balcony fill (see *LSi June 2025*). "No corners were cut," says Clarke, in the design concept of the Reference Series even though, as Kinsella is known to point out, "engineering is ultimately the art of compromise."

Compromise is minimised, however, by the brand's fierce independence, the speakers being "made by people who

don't have to answer to capital," as Clarke puts it. "We answer to our audience." He cites live music clubs that have asked for the largest model in the series, the R12, in lieu of line array, offering 110° vertical dispersion as required and 139dB peak SPL.

Down to the smallest screw, the right materials are as important here as the requirements of Cameron Mackintosh. "I think what singles us out is that we don't build to a notional architects' specification and then have to put in radical corrective equalization," Clarke continues. "There is FIR [Finite Impulse Response] processing, and you have to use our amplifiers, but everything's right from the ground up. We don't have an obsession with weight, and we don't play fast and loose with the physics of the cabinet - if the cabinets vibrate and breathe, there is no EQ in the world that will fix the problems that creates."

FUNKTION-ONE

Point source loudspeaker design has been fundamental to Funktion-One's approach for more than three decades. Coherent arrival, high efficiency, low distortion and controlled directivity are the main tenets of loudspeakers that always claim to preserve the immediacy and emotional intent of the music.

That commitment has driven deep research into horn loading, transducer behaviour, crossover integration and enclosure geometry, all with the aim of reducing distortion, improving projection and preserving the natural relationship between performer, system and listener. Funktion-One's latest point source systems, Evo 2 and PSM15, are expressions of that work.

"Evo 2 is a compact, high-output, fully horn-loaded three-way loudspeaker which uses the latest Funktion-One driver technology," explains founder

"We don't play fast and loose with the physics of the cabinet - if the cabinets vibrate and breathe, there is no EQ in the world that will fix the problems that creates..."

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Tony Andrews. "Its dedicated midrange device achieves 111dB/1W/1m sensitivity and a measured distortion of less than 0.5%, giving Evo 2 the presentation, intelligibility and dynamic freedom normally associated with much larger systems. It can be deployed singly or arrayed two-wide, with or without the Evo 2L low-frequency extension, making it highly adaptable across live, club, theatre and installation environments."

PSM15 (see *LSi June 2026*) applies the same point source thinking to stage monitoring. Its bi-amplified triaxial design combines optimised HF and LF devices around a dedicated midrange, working through a simulation-optimised waveguide with exceptionally consistent directivity. The result is a compact, high-SPL monitor described as having natural tonal balance, strong gain before feedback and the clarity performers need to connect with their performance.

"Large-format arrays, including Vero and VX, remain essential for large-scale reinforcement," Andrews notes, "but for many applications a well-designed point source loudspeaker still offers the most direct route to practical deployment, coherent coverage and exceptional audio quality."

KV2 AUDIO

The Czech position has always been clear: no rush of new claims for point source, in Leeds or anywhere else, could change the steady course of KV2's commitment to the format through a digitising world. That said, heads are by no means in the sand.

"The reality is that 99% of our products are used every day with digital mixes of one kind or another," admits Jonathan Reece, "either from the raw mixer, through a matrix or as part of an immersive production. We know that, but we'd rather there was as little processing as



- ↑ KV2 Audio's new EX15 (left) and SL412 Wide Dispersion Active Driven System
- ↓ The CDD series from Martin Audio

"We employ our own 20MHz processing, which is the highest sample rate used in the industry today . . ."

- Jonathan Reece (KV2 Audio)

possible before it reaches our speakers. Furthermore, it only reinforces our belief in getting the boxes right in the first place: if you start with something that's the best it can be, it can only help if you keep adding layers that compromise it. Digital is about rounding calculations that invariably remove or change something, so the fewer times you do it, the better."

To make its own contribution to the new world, KV2 is finally working on an AVB/Dante interface, again with a commitment to the finest components and techniques to obviate what it sees as the negatives. "We've got to be relevant in the modern audio world," Reece reflects. He cites power handling, especially from Class D amps, as the only meaningful upgrade for some competitors in this sector, but with the focus still on audio integrity acknowledges that "we have a compression driver that's over 20 years old - but it measures 0.03% THD at 120dB. That's what really matters."

Reece gives point source "a much better chance of reproducing high-quality audio" because of its reduction not only of processing layers, but also cabinets. "Unfortunately," he states, "regardless of the brilliant wave guides or complex algorithms there is still no getting round the fact that air moves randomly, whether that's wind outside, or the audience moving indoors. Even AI is unable to predict that random air movement, so it seems to be a problem that won't easily be improved regardless of the

advances in multiple array technology. Point source is, of course, affected in the same way, but with far fewer sources the interactions and cancellations are tiny in comparison and the resulting audio interference relatively small."

And where KV2 does apply digital alignment, "we employ our own 20MHz processing, which is the highest sample rate used in the industry today."

MARTIN AUDIO

Three distinct series in this catalogue - FlexPoint, CDD and TH - offer varied solutions for live sound with the obvious electronic companionship provided by stablemates Linea Research, TiMax and panLab. For Ben Todd, senior applications specialist, each contains a unique design bonus that users should recognise.

"For sheer acoustic science genius," he begins, "look at how both CDD and FlexPoint use the magnet pole piece to shape HF output, making the phase plug exit of the HF driver into part of the waveguide. In both CDD and FlexPoint, a little like line array, there is a slot exit before the waveguide so that, according to Todd, "you maximise your frequency control because the whole driver is acting as the waveguide, and as the signal emerges from the centre of the driver the HF is already in the right shape."

"As it passes over the waveguide - which is built into the cone

surface - and then reaches the edges, all the mids start coming through in exactly the same way. It's coherent, but with a huge amount of extra control relative to box size and driver size. In CDD, two drivers share the same magnet structure to reduce cabinet volume and cost. Then, in FlexPoint, we go for a higher power output by using a separate, coaxially mounted HF driver in its own magnetic gap."

Todd believes that line array is still the best solution for long-throw stereo concert applications, but that the kind of point source advantages proposed by CDD and FlexPoint really come into their own with spatial audio. "Typically," he says, "all those interaction issues happen at the crossover frequency, and in a coaxial design the path from the HF waveguide is at the same acoustic centre as the mid-bass. With a conventional two-way design, at the crossover frequency you always have hot-spots and cancellation zones in the near-field and the mid-field. Beyond that, any two-way speaker will become more coherent."

"But with immersive configurations, with many speakers relatively close to the audience, the chances of getting a problematic summation - not just between two separate speakers, but between speakers with two separate sources within them - are reduced. You effectively have four sources, but you don't suffer the summation issues at the crossovers."

This can bring benefits to object-based mixing which, in the first place, separates sources. These are then coherently propagated through an array of loudspeakers that needs consistent summation across all frequencies: if you achieve a coherent array, it will help to clarify the mix. No wonder Martin Audio feels at home with TiMax and panLab . . . "I would say the problem is not the fact that you're applying DSP," Todd says, "it's whether what you're using is convincing and coherent. You can completely believe in a TiMax or panLab mix."





"To me, real point source is coaxial. A cone-and-horn pairing is not, because you've got two acoustic centres . . ."

- Chris Scott (Inspired Audio)



- ↑ Top left: Nexo's P Series
- Above: The AX4, AX6 and AX8 from Inspired Audio
- ← Far left: RCF's KX family
- Left: GT 8 from TT+ Audio

Even the three-way THS works in this context with minimum cancellation. Todd adds: "It's really a small, forward-firing array in a triaxial driver. Although it's a single source, it's got a very large waveguide, which works in those tight-footprint proscenium systems in a way that fires the key high-mids very widely across the audience."

NEXO

Nexo's history of innovation in point-source loudspeaker technology is well known, with countless rental companies and installers remembering fondly the breakthrough levels of performance, versatility and, not least, financial returns that came with their investments in the iconic and groundbreaking Nexo PS and Alpha Series systems of the 1990s.

Drawing on the spirit of their predecessors, according to UK sales manager Rich Soper, Nexo's current offerings in a category largely defined by the French manufacturer itself suggest a similarly unwavering commitment to innovation, with so-called '+ Series' edits of both PS and Alpha ranges representing "the highest performing and most technically advanced manifestations of their respective platforms."

Soper continues: "An exciting synergy of sleek good looks and stunning, high-output performance, P+ Series P8, P10, P12, P15 and P18 cabinets employ custom HF/LF drivers in a coaxial configuration to deliver perfect

phase alignment, exceptional clarity and a smooth response across the full frequency range."

Available in mobile, install and hybrid TIS versions, cabinets can be deployed vertically or horizontally (as a wedge monitor) and HF dispersion angles can be changed quickly with magnetic horns and flanges to match the application precisely, with versatility further expanded by a comprehensive range of accessories and partner subs.

"This blend of power and precision along with a flexible range of power and processing solutions sees P+ speakers deployed across a range of applications, from mobile sound reinforcement to immersive audio installations," adds Soper, "with the P18 in particular quickly establishing a reputation for unrivalled power and throw as a standalone box in sports stadium installations."

Uniquely, Nexo's new, long-throw, 'three-box' Alpha+ FOH system combines the benefits of line source coupling with the easy deployment typical of point source speakers. The waveguide block of the M210 main module can be 'unlocked' and its articulation changed from narrow to wide/standard vertical coverage, with the continuously varying horizontal directivity from 60° at the top to 120° at the bottom modified to 90°/120° or 60°/60° using magnetic flanges. Stacked on a mid-sized festival stage, installed in a club or deployed in a theatre where a line array

can't be flown, Alpha+ reimagines the original for the modern age.

RCF AND TT+ AUDIO

If 'punching above its weight' is a useful metaphor, it can be taken almost literally in the case of the new GT 8 by TT+ Audio. Unlike RCF's KX Series, GT 8 is a twin 8" design with the compression driver in the middle, providing 137dB at only 18.7kg. It is a passive design, making the most of the brand's proprietary XPS amplifier platform, and is built for the road. "It's wonderful having the TT+ GTX line array," says Alfie King of RCF UK sales and marketing, "but we needed something to be that point-source solution for in-fills that is both compact and powerful. It needs to match the dynamic range of the line arrays."

Materials matter: marine-grade Baltic birch ply is covered with a polyurea coating and is IP54 rated at all the right sockets; and the handles are die-cast aluminium with rubber grips, as well as having flexible mounting and flying options. King describes it as "no compromise". The 3" driver is titanium, while the 'True Resistive Waveguide' is rotatable as appears to be the latest fashion. It also shares the same proprietary FIRPHASE processing, a phase-linearization technology using FIR filters, as RCF's KX Series, which is what 'TT' used to be: an entirely active, DSP-loaded 'touring and theatre' range.

"RDNet is built-in to KX," continues King, referring to RCF's speaker management

network and control platform, "while two of the models have dual drivers: this gives you all the options for a complex FOH system, as well as a supplement to, say, our HDL line array." Thanks to FIRPHASE, says King, a KX will deliver snappier snares and higher fidelity guitar picking, for example.

INSPIRED AUDIO

Founder and MD Chris Scott is one of pro audio's purists, a man who can smell a Baltic birch twig hidden in a multi-storey car park. "To me, real point source is coaxial," he says. "A cone-and-horn pairing is not, because you've got two acoustic centres. The issue is - and we've got four coaxial drivers in our range - you either let the cone be the horn, which can be very effective, or place the horn over the cone, which limits the excursion on the driver and can cause issues with the air that's been compressed against the back of the horn."

One common solution today, says Scott, is symmetrical coaxial with a driver either side of the horn, but such structures can suffer from side lobing: the solution is either to reduce the acoustic centre between those drivers or reduce the crossover point by using a DCX-style compression driver. Alternatively, you can use an axial HF over a pseudo-horn, as Inspired does with Optima 12 and MQL

Evo. "But these techniques suggest to me that you're modifying array boxes to make them point source boxes," Scott continues, "which makes sense commercially if line array is too big or expensive, especially in theatres. And, if you're plotting seven boxes, you want seven acoustic centres - not 14."

This could also mean a retreat from conventional cone-and-horn configurations as symmetrical solutions proliferate - especially for more focused spatial audio systems. Inspired Audio has genuine point source for live sound in the form of the AX Series, while the MQL Evo 'hybrid' has a horn-loaded 8" driver with an axial HF in front - but with an asymmetrical bass end. "It has a coaxial mid-HF element," Scott explains, "but at the moment it does not have a symmetrical coaxial arrangement around it. A lot depends on how and where you stack them, of course."

An OEM deal has added electronics to the Inspired Audio portfolio in the shape of the Eflex Series of DSP amplifiers.

SOURCE MATERIAL

Several more examples have been showcased this year, enriching the market and stiffening the competition

in this crucial sector. They include Adamson's CS10p and CS7p with Milan audio and on-board DSP; JBL's active SRX915M and SRX912M with dedicated software suite; and Yamaha's powered DXR Mk3 with intelligent DSP. Meanwhile Georgia-based Danley Labs' new Exodus range claims to redefine point source using multiple HF drivers in one enclosure, unified by a patent-pending acoustic lens technology called Cohearix.

And lest we forget . . . the home of line array has plenty to say about point source, with the X Series providing L-Acoustics with the kind of coaxial technology and coherent off-axis response that "makes them perfectly suited for spatial mixing," according to the manufacturer, "where listeners need to localise where sound is coming from in a 3D space without harsh frequency drops."

Finally, Meyer Sound's Ultra family of point source solutions, including Ultra-X20, Ultra-X40 and Ultra-X80, combines power and scalability with "granular system control" thanks to the Galileo Extended Networking platform (GEN-1) and Nebra 2 free management software, which extend DSP directly into the loudspeaker while providing a one-stop control platform. ☒

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Bred to Adapt.

The U-Series

Welcome to System Architecture Freedom

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