

44 business feature

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● In short, a great many amplifier manufacturers have been working hard to boost the power output of their leading products. But what prompted this trend in the first place, and can it continue indefinitely? PSNE set out to answer these – and other pressing questions – in the company of the pro-amplifier world's leading players.

Technical factors

With the vast majority of manufacturers wishing to ensure across-the-board appeal to both rental/touring and installation customers, the emphasis is on the production of powerful, versatile and reliable amplifiers that can satisfy a wide range of applications.

To a great degree, however, this new market demand has been facilitated in the first place by recent progress in the overall sophistication of loudspeaker technology. "As speaker manufacturers increase design concepts to include alternative cone/compression driver ohm loading, or as component manufacturers increase power handling of their parts, so the demand for increased amplifier power is made. It is, therefore, market-driven," argues Camco's Mick Anderson. "It is now quite normal to see a speaker manufacturer design a line array, for example, whereby the overall loads required dictate that power per band may be in excess of 2,500W. In some cases this figure rises above the 3,000W mark."

"Power-wise, speakers and amplifiers have to go hand-in-hand," says Michael Munch, VP strategic product management at Lab.gruppen. "Improved power

handling in drivers and an increasing desire for less speaker volume in systems requires more powerful amplifiers."

Consequently, a key priority for companies such as Lab.gruppen, says Munch, has to be the production of amplifiers "that can deliver much more power, efficiently. Our job is to offer ever-improving power density as well, and more overall power to aid the cost of ownership and operation."

Economic drivers

There is a general consensus that the demand for more powerful amplifiers cuts across sectors, encompassing all areas of the live sound and installation

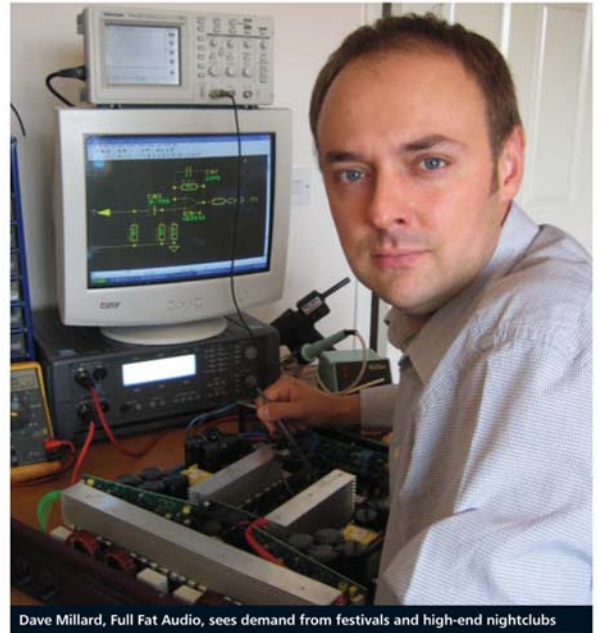
and volume. "They want to reduce the weight and volume of product on tours," he says. "Consequently, amplifiers are being asked to deliver more power into lower impedances with less weight in more applications, thereby reducing the number of racks in a truck. Loudspeaker manufacturers strive to make their products smaller, more efficient and able to handle more power, [in order] to save truck space. They also want headroom so the amplifier manufacturer strives to create more power to satisfy the demand of the loudspeaker manufacturer... It's been going on for years and nothing will stop it!"

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markets. For example, Full Fat Audio's Dave Millard highlights the high power and long usage requirements of sound suppliers for major festival events, and the increasing trend towards the specification of loudspeaker products oriented towards the live sound market for installation in high-end nightclubs.

Meanwhile, MC²/XTA's sales and marketing director, Bill Woods, highlights the desire on the part of tour managers to reduce product weight

Nexo's marketing manager, Joe White, puts the demands of both rental and installation customers in the context of the company's own forthcoming NXAMP 4x4, which incorporates an amplifier and controller, and was developed in collaboration with Yamaha. "If you are a stadia with 200-300 cabinets then you are really limiting costs by reducing the number of amplifiers," he says. "Similarly, rental companies like to minimise the number of trucks they send out; something



Dave Millard, Full Fat Audio, sees demand from festivals and high-end nightclubs

they will be able to do with a powerful amp such as the NXAMP 4x4."

Void Acoustics' director, Alex Skan, highlights the demand for more substantial amplifiers as one component of complete system packages supplied for installation or touring rigs. He adds: "In retail sales, the more powerful amplifiers tend to be sold to individual end users for bass-system applications, particularly at the less expensive end of the market."

All are agreed that the benefits for customers and end-users of more powerful amps in terms of reduced racking, cabling and trucking can be very considerable. However...

"Remember that it's not just down to having a specification which says the amp can deliver X amount of power, it's down to the amp actually being able to do this – hour after hour, day after day without problem or loss of sonic integrity," says Anderson.

The point is echoed by Yamaha Commercial Audio's European marketing director, Nick Cook: "In housing it is location, location, location; for us, it is reliability, reliability, reliability. They are the three primary driving forces at Yamaha, both internally in terms of product development

and how we actually view what we should be doing as a business."

New ways of thinking needed?

The widespread adoption of more sophisticated amplifier topologies, including Class D, has been a greater facilitator in the advent of higher-power devices. But could it be that manufacturers are now approaching a glass wall, the eradication of which will require new quantum leaps in design and efficiency?

Lab.gruppen's Munch certainly seems to envisage this kind of paradigm shift. "In the immediate future, new ways of using existing technologies, new or improved use of amplifier topologies, and new ways of thinking will all have to be used to manufacture better amplifiers," he says.

One of the greatest obstacles to be negotiated, continues Munch, is the power provided by the AC system. "There is a balance between AC inlet, power supplies and the power modules, and to make the amplifier more powerful efficiency can be improved in specific areas of the amplifier or as an overall unified efficiency improvement in order to deliver more power," he explains



Camco's Mick Anderson



QSC's Evan McKenzie