

The ProAc Response K6 Loudspeaker

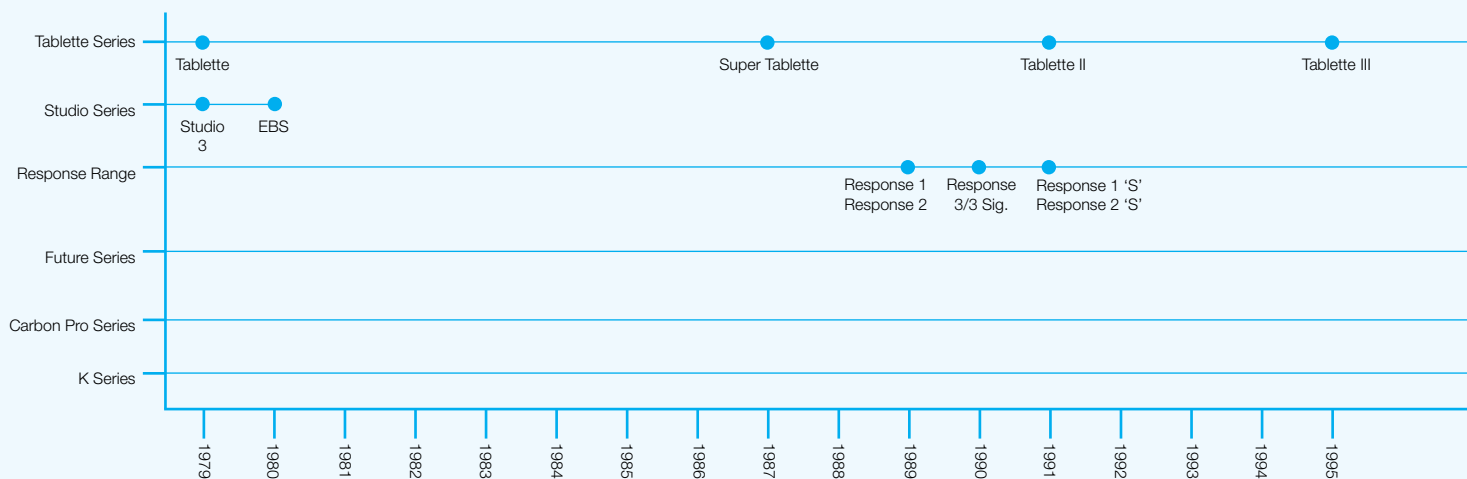
By Roy Gregory

Once upon a time there was a little speaker that could and a bigger one that did; ProAc's Studio 3 represented an early object of hi-fi desire as far as I was concerned (especially the EBS version), while the ultra-compact two-way Tablette was a more achievable goal. It still is, and if large, three-way stand-mounts have largely become the stuff of history if not legend, then the Studio 3's descendants are also still with us. In fact, no other UK domestic speaker manufacturer that I can name has enjoyed as long an uninterrupted run in business, without changes in ownership or design responsibility, as has the Northamptonshire company. Established over 30 years ago and still run by the original founder, Stuart Tyler, ProAc still seem to be one of British hi-fi's best kept secrets. With what can only be described as a talent for flying under the radar, below the horizon and keeping to the shadows, it's a wonder they've stayed in business... At least it would be if their products weren't so consistently reliable, honest and above all, rewarding. Like I said, a well-kept secret – not least because once someone owns a pair of ProAc's they seem to hang on to them for an almost indecent period of time.

At least in part, this low-profile reflects the Company's emergence at a time when the UK market was dominated by a small number of very large (and very loud) personalities, manufacturers who insisted not only that their way was the only way, but who liked nothing better than to debate the fact with (a polite term for "bully") those who disagreed with them. Mr Tyler had firmly held views on how best to proceed – one of which was not to waste time arguing with people

who had no intention of listening. From day one, ProAc have ploughed their own distinct furrow, carefully evolving and developing those engineering elements they believed in, whilst eschewing hi-fi and high-technology fashion alike. No metal dome tweeters here, or ceramic cones: no boat-backed cabinets or constantly changing approaches to bass loading. Instead, ProAc's product development history has been one of steady refinement, cautiously embracing new approaches, technology or materials only once they've been convinced that they offer genuine benefits over and above the tried and tested.

That might seem essentially conservative, but that's not the same as old fashioned. In fact, in certain respects the company has been consistently (and in some cases uncomfortably) ahead of the curve. The Studio 3 was available in a special AlNiCo magnet version, 25 years before it became the trendy silver-bullet ingredient for retro speaker brands. They produced narrow, deep cabinets long before that became the norm and in the shape of the short-lived Future series, a range of speakers with open-baffle midrange drivers long before that too became currently fashionable. Too long before; the Futures perished, being well ahead of their time. Once bitten, twice shy, and the Company soon returned to more familiar designs, but the Futures marked two significant firsts for ProAc; the open baffles sported not only carbon coned bass units, but ribbon tweeters too. Now, a decade later, both technologies (albeit in highly developed form) have started to find their way back into the range, first in the flagship Carbon Pro models, latterly in the Response D40/R and now, the new K6.



The K6 stands at the top of the Response series. It is a largish floorstander, 1185mm tall, with ProAc's trademark resolutely rectangular cabinet and narrow, deep footprint. A three-way design, the front baffle is populated by the same ribbon tweeter used in the Carbons (sourced from Italy but built in the Far-East), a 50mm soft dome midrange unit from Germany (another trademark ProAc item) and a pair of carbon coned 7" bass drivers. The low frequencies are loaded by a large diameter, downward firing port.

So much for the outside story; yet with so many speakers, that's really all you get – and all that the designer seems to be interested in. Drive units and cabinet composition/shape are the twin peaks of loudspeaker fashion, a world in which out of sight is very much out of

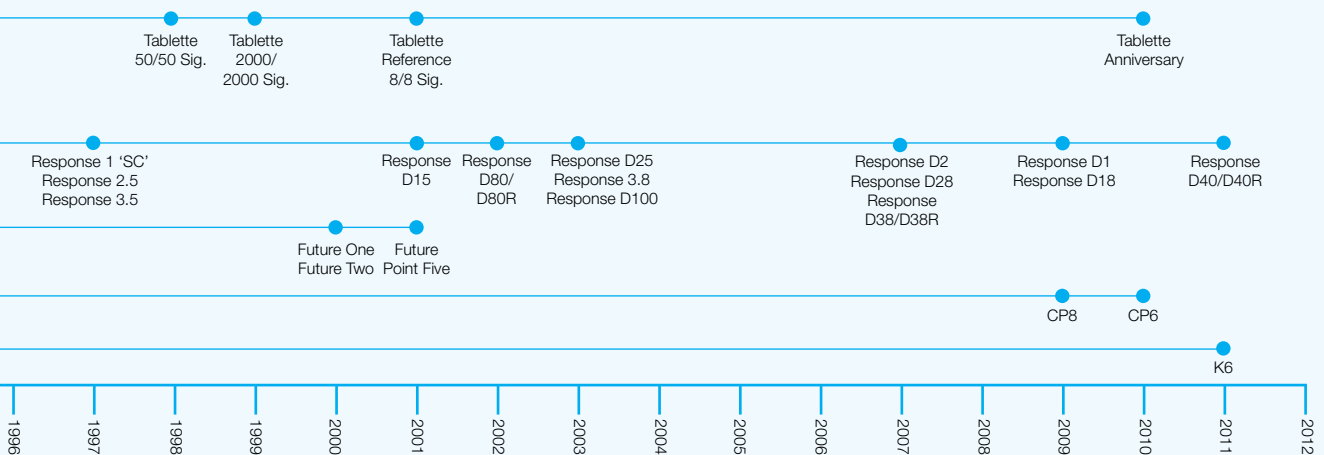
mind. But as I've already suggested, ProAc are anything but slaves to fashion and in fact, one thing that has always set the company apart from the crowd is their concentration on what's inside the box as opposed to what's on show.

The heart of any loudspeaker is always the crossover – or in some cases, its absence. It's also by far the hardest part of loudspeaker design to get right. While there are any ▶



The ProAc Family Tree

In the opening paragraph I suggested that ProAc is unusual for the continuity and longevity of both the Company and its products. This is a story of evolution rather than revolution, of the careful refinement and honing of existing ideas and elements, a fact reflected in the polished performance of the current range. But it's not until you see the products laid out in the form of a timeline that you realize just how significant this is. Each line below constitutes an unbroken development path, each model clearly related to the one before. What is fascinating is the shelf life of individual designs, as well as the number of basic design concepts that have continued from inception through to the current range. It rather underlines the clarity of both thought and purpose, the very qualities that so neatly encapsulate the ProAc ethos.



▶ number of computer programs that, given a box size and set of drivers, will calculate you the “perfect” crossover slopes, sonically and especially musically, they deliver a lot less than the whole story. I hesitate to describe it as black art, but there’s no doubting that this is where so much of the skill and experience that turns a good loudspeaker into a great one resides. It’s also where dealing with familiar variables really comes into its own. A consistent approach to bass loading and identical drivers (or at least, driver technology) make the voicing of a crossover and a speaker both easier and more predictable – leading in turn to far better musical results. In the case of the K6, the bass drivers might be all new, but the dome midrange and ribbon tweeters are familiar from earlier designs, while the woofers are locally built to ProAc’s own spec and using their own, specially produced Kevlar cones. It’s also interesting to note that both tweeter and midrange employ shallow horn flares to help couple their output to the air in the room – another point of consistency.

The company has always relied on reflex loading, and the downward firing port is also familiar territory from earlier designs. What is interesting though, is the way in which the plinth acts to terminate the port. In speakers where the port simply fires onto the floor surface, the distance to and nature of that surface can be extremely variable, complicating set-up and voicing with a completely uncontrollable parameter. ProAc’s approach makes the room interface far more predictable, musical results more consistent – yet you won’t find any mention of that fact in their literature. It’s almost as if they consider it so obvious that it’s not worth mentioning.

The other (supposedly) silent contributor to speaker sound quality is the cabinet. Its mechanical behavior and ability to deal with unwanted energy is critical to musical performance. Unfortunately, the longer a panel becomes, the lower its

resonant frequency and potentially, the more audible its effect. When the hi-fi world rushed to embrace slim, floorstanding cabinets, they forgot to mention this – and no one seems in any hurry to bring it up. Once cabinets get much over 800mm tall, the steps a designer takes to control their behavior can make or break that speaker’s performance: hence the massive construction or exotic materials used in cost no object designs. Unfortunately, those options don’t really exist at the K6’s price point. Instead, ProAc will have to rely on good old-fashioned engineering – the kind that uses appropriate tools carefully applied, rather than a bigger hammer. That means carefully dimensioned MDF, thicker where it needs to be, heavily braced and damped with Bituminous pads. It might be old-school construction, but done well it still delivers astonishingly effective results – and there’s not many people who can apply ProAc’s accumulated experience to the problem.

Devoted followers of female fashion (or watchers of Royal Ascot and Royal weddings) will be familiar with the concept of the “fascinator” – some sort of wispy, almost hat that perches atop the cost no object hair-dos of the rich and stylish; at least those who want to get noticed. Not so long ago, I would have put the majority of ribbon tweeters in much the same category; attention grabbers that often fail to deliver any real substance. But the times they are a changing, and whilst it’s definitely that ribbon unit that will provide the obvious visible fascination as far as the K6 goes, in this instance the speaker itself joins a short but growing line of successful hybrid designs that have reached the market in the last year or so.

Manufacturers produce products, a truth that might seem self-evident. But when it comes to a loudspeaker, what exactly constitutes the product? Is it the loudspeaker itself, or the music that it produces? Ask the loudspeaker manufacturers and the answer will be almost instant, although some will lean one way and some the other. To most the answer is obvious simply because they’ve never actually considered the question. In fact, take a look at the many, many manufacturers offering loudspeakers and it’s not hard to decide which camp they’re in. Now ask yourself a question; which group would you rather buy your speakers from? ProAc are firmly and unashamedly in that group that concentrates on music as product, a fact that becomes apparent as soon as you listen to their speakers.

ProAc quote a bandwidth extending out to 30kHz, which in these days of diamond and beryllium domes, is far from exceptional. I also suspect that it might also be termed “conservative” or “realistic” depending on your point of view, reflecting perhaps an innate understanding of the fact that while top-end extension is nice it’s far from the whole high-frequency story. Indeed, anybody who has spent time playing with serious super tweeters will tell you two things; they only work when you ▶



► get the integration just right and when they do work, the first place you hear the difference is at the bottom-end. Yes, you did read that right. Decent, linear high-frequency extension and energy is most easily heard as tighter, more precise, more tactile bass – with much better timing. Basically, it's as if getting the top-end just right locks in the rest of the range, as if a fine mesh has been adjusted so that it precisely overlays the bigger grids below. Well, the K6s have clearly got the quality and integration of their ribbon tweeter just so, because that's exactly how they sound. Not only are they seamlessly continuous from bottom to top, they have that clarity and sense of musical organization, the sort of inner balance and Zen-like calm that only comes from a really well sorted system, where the drivers, cabinet and crossover work together to create a whole that's greater than the sum of its parts.

But to get to that happy state you need to pay attention to at least one specific aspect of set up. Whilst the ribbon tweeter enjoys excellent horizontal dispersion, vertically it's another matter, making the rake angle of the speaker unusually sensitive, especially if you are more used to dome tweeters. To get the best out of the K6 you'll need to make sure that the ear is on the tweeter axis when you are seated in the listening position – and that means getting out the tape measure, a laser pointer and a second pair of hands. It might also mean that the speaker needs to tilt slightly forward to achieve that correct rake angle, a reflection of the tall cabinet and the modern penchant for ever lower sofas. You can hear the effect just by sitting higher or lower in your seat; as your ear nears the tweeter axis, you'll hear the soundstage open out and the instrumental placement lock in. You'll also hear the timing lock in, so don't think this doesn't matter if you don't listen to classical. But take the modest amount of time and trouble required to dial it in and the musical rewards delivered by the K6 are considerable.

What you should wind up with is a sound that steps away from the speakers and away from the system producing it. The K6 is all about balance. It's got enough weight to deliver satisfying orchestral crescendos, enough attack and dynamic expression to reveal a player or vocalist's technique. The soundstage is deep and wide enough to let you hear who is doing what with whom, and the broad horizontal dispersion leaves plenty of latitude when it comes to toe-in. The well-behaved and orderly bass also made placement a doddle, with utterly predictable results from each change in position; just as well given the potent bass performance of which the K6s are capable. Although I used the speakers in a largish space, this precision is a facet of their performance that suggests they'll be far more tolerant of smaller rooms than you might expect. ProAc suggest setting them up on an 8' equilateral triangle, so if you can accommodate that, then you've got a starting point to work from.

While individual performance traits can be bettered by other speakers, it's the package as a whole that makes the K6 a winning combination. The bass doesn't have the depth or bottomless weight of really full-range (much larger) speaker systems, it's ability to capture the character of bass instruments, their contribution to the music, is uncanny. The deep bass guitar melody that underpins the Stewboss track, 'Wanted A Girl', with its sustained notes and soft edges, is a real test of a speaker's ability to define pitch and placement at low frequencies, a test the K6s pass with flying colours: Pitch, position, shape and pace are never in question, creating the perfect, pulsing swell below the array of subtle percussion work, guitars and harp that fill the soundspace and cradle the plaintive vocal. Yes, if you want to get hi-fi anal about it you could criticize the absolute separation, the definition and resolution, the immediacy but that misses the point; it works – musically and emotionally, it works.

Extending the K6's hi-fi performance envelope without disturbing that fragile balance, that ability to both convince and satisfy – and to do so successfully enough to let you forget the speakers, forget the system and simply enjoy the music – wouldn't just be difficult, arguably it misses the point altogether. There are better speakers than the K6 – although not many. They are all either bigger or more expensive – and not many of them are made in the UK. I haven't heard ProAc's more expensive Carbon Pro models, both of which pre-date the K6, but this could just be the best speaker that ProAc have ever made; it's certainly the best I have heard. It might even be more than that; it might just be the best conventional speaker currently being built in Britain. +

TECHNICAL SPECIFICATIONS

Type: Three-way, reflex loaded loudspeaker

Driver Complement: 1x ribbon tweeter with AlNiCo magnets; 1x 50mm soft-dome midrange; 2x 170mm Kevlar coned bass units

Bandwidth: 25Hz – 30kHz ±3dB

Nominal Impedance: 4 Ohms

Sensitivity: 90 dB

Dimensions (WxHxD): 215 x 1185 x 370mm

Weight: 44kg ea.

Finishes: Black Ash, Mahogany, Cherry or Maple Rosewood or Ebony to order at extra cost.

Price: £12,995 (standard finishes); £13,995 (deluxe finishes)

Manufacturer: ProAc Loudspeakers

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