

PMC twenty.21

Marking PMC's first 20 years is a range called – aptly – ‘twenty’. Here's the baby in the range: will owners want to keep it long enough to test the 20-year warranty?

Review: **Ken Kessler** Lab: **Keith Howard**

Keith Tonge, PMC's Product Manager, is a fount of company lore. For a dyed-in-the-wool anachrophile like me, who once worshipped IMF and Radford transmission-line speakers, I was fascinated by certain of his recountings. Like how co-founder Peter Thomas is a transmission-line obsessive who *collects* the damned things, with a near-complete gathering of IMFs, TDLs and others lost in the mists of time [see p122].

Which leads me circuitously to the twenty.21, the latest of PMC's compact transmission-line designs. Maybe Peter realised long ago that sheer size mitigated against the sales of boxes like IMF TLS80s. While PMC also makes studio monitors big enough to party in, I heartily concur with what he's produced for the rest of us, as if to prove that transmission-line technology – which was, ironically, conceived to deliver the maximum bass from the smallest enclosure – could be applied to manageable boxes.

For me, the twenty.21 follows extended use of the DB1+ standmount from the range below it; they served me well when reviewing sub-75W amplifiers, from NADs to PrimaLunas. Those sold for circa-£700 at birth, so the '21 doubles the tariff. And yet it's not much larger at a room-friendly 325x152x277mm (HWD), with another 6mm for the grille.

It is, however, the baby of the family, all of which are two-way transmission-line designs. Next up is the slightly larger twenty.22, followed by two floorstanders: the 923mm-tall twenty.23 and the 1030mm-tall flagship, the twenty.24.

THE ATL SPECS

Common to all is the ferrofluid-cooled 27mm Sonolex soft-dome tweeter, made to PMC specifications by SEAS and unique to this series of speakers. SEAS's designers worked directly with Peter to ensure that the tweeter would achieve a smooth response down to the 1.8kHz crossover point, with 24dB/octave slopes.

The crossover common to all models uses a military-grade glass-fibre board

chosen for its rigidity, to guarantee that the location of each component is identical to that of the reference. The boards bear thick pure copper tracks, and gold through-plating for enhanced reliability and better performance. All components – including Solen audiophile-grade capacitors – are chosen for transparency and are precision-matched, PMC undertaking appropriate testing to ensure that speaker pairs will be identical when despatched.

This model and the smaller floorstander use the tweeter with the 140mm M13 woofer, while the .22 and the .24 are fitted with the 170mm M17 woofer. Both were developed by PMC specifically to suit the new ATL (Advanced Transmission Line) twenty designs, and are made in-house with, again, an eye to quality and consistency. They employ lightweight, stiff paper cones with matte doping, and are fitted to a cast alloy chassis.

TIME ALIGNMENT

All of the models' cabinets are slightly sloped at a 5° angle in parallelogram form for physical time alignment of the drivers. Available for the two stand-mounts models are optional, dedicated 610mm stands that complement the angle. The cabinets are made from 18mm Medite finished in oak, walnut or amarone veneers as standard or this glorious 'Diamond Black'. All models offer bi-wiring capability, via nicely-made multi-way gold-plated terminals.

The series' name resoundingly celebrates the company's anniversary, 20 years of ATL

RIGHT: Front of sloped enclosure shows a 27mm Sonolex tweeter, the 140mm M13 woofer and an open port below; magnet-attached optional grille is in black fabric

loudspeaker design *and* the presence of a confidence-inspiring 20-year-warranty. PMC's professional background [see boxout] means that the company has always prized durability, given that studios are far more harsh environments than domestic listening rooms.

Where these differ from utilitarian pro models, aside from the luxurious finishes, are in such details as the magnetically fixed grilles, the types of binding posts



(in accordance with user feedback), the easy placement thanks to the forward-firing transmission-line throat, and the amp-friendly load – this model is specified as 87dB/1W and 8ohm loading [see Lab Report, p63]. The John Howes-modified Quad II monoblocks mated with it as productively as Posh did with Becks.

As for the design goals, beyond creating something suitably memorable for the birthday year, PMC concentrated on the reduction of baffle width, lower distortion drivers, superior crossover components and set-up that's easier to optimise. I haven't enjoyed a speaker this unfussy since the Sophia 3s arrived, plunking them onto 24in Foundations with slight toe-in yielding a

'The brass, which can screech like a banshee, was simply sharp and clean'

sound that was only marginally improved by further tweaking.

A SCREAM!

Along with the Howes Quads and II-eighty monoblocks fed by the Audio Research REF 5 preamp and PH5 phono stage, I gave the PMCs a burst of the NAD315BEE integrated. Sources included an iPod Classic, Marantz's CD12/DA12 and Linn LP12/Ekos/Arkiv analogue front end. Wiring was YTER. At no point, did the PMCs seem to want for more. They're so accommodating that I suspect you could dig out a 20-year-old solid-state receiver of the same vintage as PMC itself and still have a right rocking good time.

Nothing beats a good scream, so Johnnie Taylor's 'Who's Making Love', from the Stax 50th Anniversary box set, was followed by massive doses of Wilson Pickett. The richness of the horn section on Pickett's killer take of the Robert Parker classic 'Barefootin'' immediately accomplished two things. The first was to assure the listener of the general musicality and euphony. While I have no doubt that the clarity and precision would satisfy a knob-twiddler at some 48-channel mixer, the brass at around 1m 28s – which can screech like a banshee – simply sounded sharp and clean. As for

PMC'S BBC ROOTS

PMC was formed in 1990 by Peter Thomas, previously an engineer at the BBC, and Adrian Loader, who worked for FWO Bauch, an audio distributor versed in both professional and domestic hardware. Peter worked with KEF on the design of the massive KM1 monitor, and still owns a pair, housed in PMC's museum. They produced their first loudspeaker, a large studio monitor called the BB5-A, based on Peter's years of hands-on experience with BBC requirements. The first production versions were sold to the BBC and Metropolis Studios.

The BBC still uses the BB5 at the Maida Vale studios, and employs PMC speakers in other locations as well. As PMC delights in pointing out, its domestic customers listen to recordings monitored on PMCs from Brian May, Robbie Williams, Tori Amos, Tony Bennett, Stevie Wonder, Coldplay, Elton John and audiophile favourite Eleanor McEvoy. Films which have been mastered on PMCs include *The Dark Night*, *Independence Day*, *Terminator 3* and other sonic spectacles.

Taylor's scream – chilling. Underneath it, Duck Dunn's fast-plucked bass, to the right a sassy horn section, Steve Cropper's guitar dead ahead, voices far left. It coalesced into a wall of soul goodness: no overhang, just snappy attack, while the lower registers were tight enough to rattle my memory bank.

How so? Because I haven't heard coffin-sized IMFs in a decade or so, but I certainly recall how they belied the myth that transmission-lines have plentiful but flabby bass. The .21's lower octaves had punch, kick and real depth. And it wasn't just impressive for a small box. It was, as the current vernacular states, massive.

It was clear that the narrow baffle, the dome tweeter and other elements were contributing to an incredibly wide, open and precise soundstage. Carla Thomas's exquisite 'I Like What You're Doing (To Me)' filled the room, left-to-right, with sounds clearly positioned *outside* of the speakers. Male backing vocals to the right, distaff singers to the left, Thomas in the centre, instruments array across the back: in many ways, this little box behaves like a mid-sized panel speaker. ☺

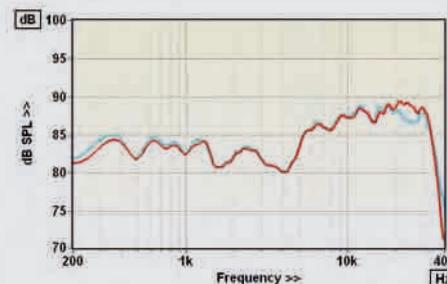


LAB REPORT

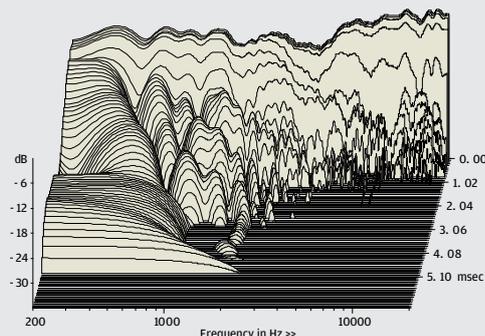
PMC twenty.21

PMC's claim of 87dB sensitivity for the twenty.21 is confirmed only by the simple average of our FFT data, which gives undue emphasis to high frequency output. Using the standard pink noise measure sensitivity falls to below 85dB – a figure more consistent with the twenty.21's perceived sensitivity, which is distinctly below average albeit fair for a speaker of these compact dimensions. The reason for the significant difference between the mean and pink noise figures is clear from the on-axis response measurements [see Graph 1, below, measured at tweeter height with grille removed] which show a distinct shelving up of output in the tweeter passband. This suggests that the twenty.21 will deliver its most neutral tonal balance when listened to somewhat off-axis. Despite this treble shelf the response errors are fair at $\pm 4.5\text{dB}$ and $\pm 4.4\text{dB}$ respectively (200Hz–20kHz) and the pair matching is tight at $\pm 0.9\text{dB}$ over the same frequency range. Bass extension of 59Hz ($-6\text{dB re. } 200\text{Hz}$) is fair for the size of cabinet.

PMC could have improved the sensitivity by lowering the twenty.21's impedance but appears to have preferred to ensure that it presents a benign load to its partnering amplifier. A minimum modulus of 6.4ohm is consistent with the 8ohm nominal rating, and the minimum EPDR (equivalent peak dissipation resistance) is 3.0ohm at a high 4.6kHz. Of more practical significance is the dip to 3.8ohm at 425Hz, which confirms that the twenty.21 is easy to drive. The cumulative spectral decay waterfall [Graph 2] shows reassuringly fast initial energy decay but some well-damped resonance activity around 1kHz, probably due to cone breakup in the bass-mid driver. KH



ABOVE: On-axis response shows a significant boost to treble, so off-axis listening is recommended



ABOVE: The initial impulse is evidently well-damped with some minor break-up indicated around 1kHz

RIGHT: The PMC twenty.21 allows for biwiring: rods link stout 4mm binding posts which can also accept banana plugs. There is an optional Diamond gloss black cabinet finish

Moving on to delicacy so gossamer-light that it seems hallucinatory, Simon & Garfunkel's 'So Long Frank Lloyd Wright' from last year's remastering of *Bridge Over Troubled Water* provided a challenge for what is still a compact British two-way box system. It's material that's perfect fodder for old Quad ESLs, or anything without a cabinet, because it sounds like screeching through horns, especially the flute, while any colorations will savage the vocals. This – and 'The Boxer', which follows it – sounded exactly as I'd imagine a soufflé might be if it could be turned into music.

Both songs floated, hovered over the system and were then brought back to earth by the thunderous explosions that punctuate 'The Boxer'. In both instances, the sense of stage depth was as convincing as I've heard from the best dipoles and from my beloved LS3/5As. As much as I cherished the DB1+, this was something of a leap: on a par with an upgrade from a good moving-magnet to a great moving-coil.

This deft handling of both raucous and fragile material with equal facility spoke volumes about a lack of compromise on behalf of the consumer. This is a speaker that defies the usual rock, jazz or classical shoe-horning. 'Baby Driver' boogied along with verve, the vocals meshing like the wheels in a Calatrava, a constant thrum underneath the S&G interplay. Sexy, silky, smooth – borrow whatever adjectives you'd normally apply to the best bourbon.

TRUTH WILL OUT

Needs must: there has to be a downside, right? If nits are to be picked, then one might ask for less susceptibility to mild sibilance when fed recordings 'on the edge': like 1970s West Coast classics that were over-engineered and processed to excess. Admittedly, that's not PMC's fault, but the curse is less evident on LS3/5As. The upper-mid was a touch thin with Ronstadt's 'That'll Be The Day'. Conversely, it



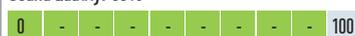
sounded perfectly concise and clear with inherently softer recordings, including early Johnny Mathis on Columbia, which can be so warm-and-fuzzy as to suggest close proximity to one of the sweaters he was wearing. A case, therefore, of picking *knits*...

PMC should arm all of its dealers with copies of Stevie Nicks' 'Not Fade Away' on the mid-2011 Buddy Holly tribute, *Listen To Me*. The drumming, handclaps and vocals, accented by a touch of guitar, form a demo-grade illustration of finesse and balance. Then the fuzz guitar slides in a third of the way through and you can utter only one word. And that is: wow! ☺

HI-FI NEWS VERDICT

At this price point, there are so many terrific speakers on the market that you'd have to be a masochist to find a stinker. The twenty.21's easy driveability and manageable size add real-world appeal to the purely audiophilic benefits of sublime sound, rich, rewarding bass and terrific imaging. With this in mind, I'm keeping a pair as my £1000-£2000 reference. Consider the sleek styling a sop to 'er indoors.

Sound Quality: 85%



HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	86.8dB/84.7dB/83.9dB
Impedance modulus min/max (20Hz–20kHz)	6.4ohm @ 9.2kHz 41.9ohm @ 1.7kHz
Impedance phase min/max (20Hz–20kHz)	-58° @ 2.8kHz 42° @ 791Hz
Pair matching (300Hz–20kHz)	$\pm 0.9\text{dB}$
LF/HF extension (-6dB ref 200Hz/10kHz)	59Hz / 35.6kHz/36.0kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	1.8% / 0.5% / 0.1%
Dimensions (HWD)	325x152x277mm