

PMC twenty.26

This floorstander is the first three-way design in the twenty series and it's a commanding figurehead for the range
 Review: Adam Smith Lab: Keith Howard

There's little doubt that a good three-way loudspeaker does many things effortlessly in a manner that even the best two- or two-and-a-half-way designs struggle to match. However, this is only true if the design is carefully thought through and judiciously implemented. Such a concept holds no fears for PMC, however, and its latest loudspeaker takes just such an approach to create a fine addition to the 'twenty' range.

It was during the development of the fact 12 – the top of the 'fact' range [see *HFN* Nov '13] – at the National Physical Laboratory that the idea of something along similar lines for the twenty series came about. The general intent was to trickle down some of the fact 12's abilities into the lower line-up, creating a bridge between fact and twenty.

Although the bass and midrange drive units on the twenty.26 may seem similar to those of the fact, they are completely new and only found on this loudspeaker so far.

The twenty.26's tweeter is the one unit carried over from the existing models and is the well proven Solonex 27mm soft-dome unit developed by SEAS in conjunction with PMC. In the smaller two-way designs this crosses over at a relatively low 1.8kHz but in the twenty.26 its output is rolled off below 3.8kHz to hand midrange duties over to the new dome mid driver.

This unit is something of a work of art and marks a big step forward in technology for PMC – a company which, let's not forget, has been using domed midrange drivers for longer than most. Designing a good dome midrange is much more difficult than a tweeter because of the greater size and the resulting compromises necessary in the material, stiffness and shape: all of these have an effect on frequency response, off-axis performance, breakup modes and power handling. Thanks to the help of the NPL, however, PMC has come up with a 50mm driver that utilises a very light yet rigid fabric dome, covered with a carefully configured

grille that aids dispersion. The pole piece of the driver behind the dome is damped in order to reduce internal reflections within the chamber and thus minimise distortion.

COMPLEX CROSSOVERS

Below 380Hz, the dome hands over to a 180mm bass driver based around a lightweight natural fibre cone, coated with a layer of doping. This driver features a vented pole piece that allows freer cone movement for lower distortion, but a side effect of this can be that the air pressure under the dust cap is reduced – which normally provides an effective brake to the cone as it approaches its excursion limits.

To this end, PMC has added a 'bulge' to the rear of the pole plate to give the coil more clearance, and has utilised a suspension design that progressively tightens at maximum travel to bring the coil to a gentle halt at the extremes of its movement. This then feeds into the 3.3m long transmission line (which is over a foot longer than that of the twenty.24).

All three drivers are allied using a relatively complex crossover that offers fourth order slopes between each unit. The circuit is laid out on a solid military-grade board with thick tracking and gold through-plating in order to allow maximum current flow. The board is directly connected to the rear of the tri-wire terminals. All crossover components were chosen following careful listening tests.

Standing just over 1m tall, the twenty.26's cabinet is certainly no shrinking violet but it is handsome and the sloped-back aspect of the front baffle is very stylish, which makes the PMC's appearance stand out from their competition. The review pair

RIGHT: Fitted neatly to the trademark sloping baffle are two new drive units for bass and midrange that work with the well proven twenty series tweeter. The extra bottom grille covers the larger transmission line vent chamber



BUILDING FOR THE PROS

Despite offering a wide range of domestic models, PMC is equally known for its professional designs and many enjoyable albums have been mastered using a pair of its loudspeakers. Several passive units are available but the largest selection is to be found in terms of active models. The three-strong 'twotwo' range is the most recent addition, all fully amplified and offering DSP sound control, plus configurations that have been optimised so that the speakers perform equally well oriented either vertically or horizontally. The crowning glory, however, is the mighty BB5/XBD-A combination, featuring over 2kW of matching Bryston amplification. These are used in many studios, including Metropolis and the BBC's Maida Vale location. They boast a weight of 136kg, four 15in bass drivers, low frequency extension down to 17Hz and a total height of just under seven feet!

were finished in walnut real wood veneer but oak, amaranone and gloss diamond black are also available. Full-length grilles are provided with invisible magnetic fixings. At the very bottom, the stabilising plinths are 5mm thicker and 30% heavier than those of the twenty.24s to cope with the extra mass of these larger cabinets.

Double-ended spikes are supplied that are carpet-piercing at one end and rounded at the other so as to inflict minimal damage on wooden floors. As per the existing models, the plinths also feature cork and rubber isolation mounts that decouple the cabinet from the floor, with the promise of better stereo definition and tighter bass.

NEW GAINS IN INSIGHT

The twenty.26s were connected up and run in for a good week before listening began; and I was very keen to know not only how they would sound in their own right, but also how they would compare with the twenty.24s which I've been using as my reference loudspeakers for well over a year now.

As the first bars of Steely Dan's 'Jack Of Speed' from their *Two Against Nature* CD [Giant 924719-2] rang out, I had a feeling that I was going to like the twenty.26s – and this proved to be the case. The initial bass notes went deep, but the very subtly strummed electric guitar out at the extreme right-hand side of the soundstage was more vivid than I have heard it for a long time: sometimes this is so subtle, it wanders quietly off into the mix, to end up somewhat lost.

When the drums came in, I was greeted with hi-hats that were delightfully crisp and yet completely free of any harshness. At one point in the song, Donald Fagen emphasises the word 'routine' and the 't' in the middle often catches out unwary tweeters to

make them splutter momentarily. Through the twenty.26s, however, it was most certainly prominent, but now merely a clean, fleeting artefact.

I had initially lined-up the speakers pointing directly at me, but noting that central vocal imagery was a little diffuse, I widened their aim to follow PMC's recommendation in the manual that their axes should cross around 500mm behind the listening position. This proved to be a highly effective move, ensuring the stereo images set up by the PMCs had a tactile solidity. The main vocal action became prominent, stretching out towards me by just the right amount, with drums behind and guitars at the extremes on either side. Underpinning everything was this convincingly firm bass line, which was tuneful and flowed with ease.

The more I listened, the more I realised that the twenty.26 built further on the already impressive strengths of drive unit cohesion that marks out their smaller twenty.24 brothers. Mating three drive units instead of two is a greater challenge and in the past I have come across more than one loudspeaker where I have felt that I'm listening to three fine drive units that just happen to be playing the same song at the same time, rather than giving a truly integrated overall result. The entire frequency range emanating from the twenty.26s gels absolutely seamlessly, though, and the result is music on a grand scale, pure and simple.

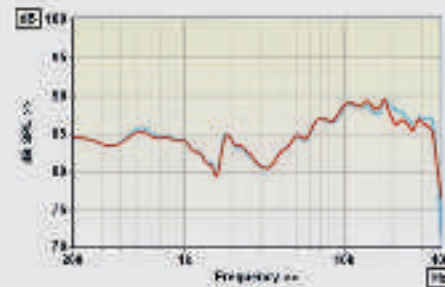
A particular strength of the model has to be the midrange dome. It is nothing short of remarkable in terms of the way in which it can dig the finest of detail from the instruments on offer and serve them up in an easy manner. A couple of times I switched back to the twenty.24s on tracks I knew well, to make sure that something I seemed to be hearing for the first time through the 26s was actually always there! In each case it was, but it just was a bit ➤



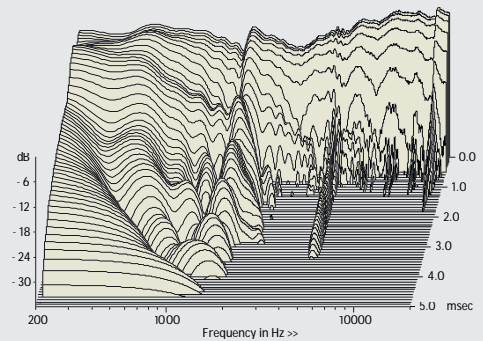
PMC TWENTY.26

PMC claims an 86dB sensitivity for the twenty.26 which squares fairly well with our pink noise figure of 85.3dB. But that includes the twenty.26's rising treble output, which provides for a more balanced treble when the speaker is listened to off-axis as intended. With this flatter response the twenty.26's sensitivity will fall to below 84dB – low for a floorstander of this size. I said of the Fact.12 [HFN Nov '13] that 'PMC has resisted any temptation to use low impedance to enhance sensitivity' but that is less the case here. A minimum measured modulus of 3.4ohm indicates that the nominal impedance should be 4ohm, not 8ohm as specified, and impedance phase angles are large enough to drop the minimum EPDR to 1.5ohm at 91Hz, making the twenty.26 a little more difficult to drive than typical floorstanders of this size.

Measured on the tweeter axis, the frequency response [Graph 1, below] is characterised by two dips in output prior to the rising treble, at about 1.6kHz and 3.2kHz. Lowering the mic position did nothing to eliminate these. Together with the treble rise they result in response errors of $\pm 5.0\text{dB}$ and $\pm 4.8\text{dB}$ respectively, 200Hz-20kHz, but while these figures are a little on the high side they will be reduced when listening off-axis. Pair matching was tight at $\pm 0.8\text{dB}$ up to 18kHz but worsened a little to $\pm 1.3\text{dB}$ by 20kHz. As is usually the case with transmission line designs, near-field bass output was somewhat uneven so the reference frequency for bass extension was lowered to 150Hz, -6dB then occurring at 41Hz. The cumulative spectral decay waterfall [Graph 2] reveals distinct resonances at about 1.6kHz, 5kHz and 18kHz. KH



ABOVE: Forward response trend shows two dips in the mid/presence but strong treble is tamed off-axis



ABOVE: Cumulative decay waterfall reveals the peak following the response dip at 1.6kHz as a resonance

LEFT: The large cabinet necessitates a thick and sturdy plinth to ensure stability and provide an optimum location for the dual-purpose spikes. Three pairs of terminals permit tri-wiring or tri-amping

As he plays the song he taps his foot on the floor, and this underpins the performance with an unexpected bass beat. This can spotlight what I perceive as the 'timing ability' of a speaker, and I did notice that the beat seemed to lag behind by the merest fraction. Moving back to the twenty.24s corrected this yet robbed some of the impact. The '26s are in no way wallowy or slow but they can occasionally lack the very last vestige of 'timing' precision that their smaller brothers do so well.

RATTLING THE ORNAMENTS

Of course, transmission lines mean big bass and so I felt that something a little naughty had to go on the turntable. I chose 'Takes You Back (Unexpected Dub)' from Jazzanova's *In Between* [JCR 025-1]. This track has some wild synthesiser bass that can rearrange shelf ornaments at the right volume level, and the PMCs had no trouble in proving so.

They remained comfortable and composed at all times, even when I was less than judicious with the volume control, and there was never any hint of strain to Desney Bailey's vocals at these neighbour-baiting levels. And when I turned the volume right down, the bass line remained vivid and punchy, demonstrating that the twenty.26s' powers of low level resolution are indeed proficient. ☺

HI-FI NEWS VERDICT

The PMC twenty.26s are a fitting flagship to the range, bringing the delights of a well designed and beautifully engineered three-way loudspeaker to a price point that is not unduly high. The two new drive units, which were created specifically for the model, do a first-class job, with the midrange dome being a particular high point. However, all three drivers combine flawlessly to give a truly musically adept result.

Sound Quality: 83%



less obvious through the smaller models: the twenty.26s seemed to shine a more detailed spotlight on the minutiae of recordings.

A perfect example of this was 'Hey Hey' from Eric Clapton's *Unplugged* LP [Reprise Records 9632-45024-1] with Eric's vocals projected expertly, and the string plucks as good as I know them. But through this bigger model, the fretwork from his guitar was rendered with just that extra layering of detail.

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	87.3dB/85.3dB/84.4dB
Impedance modulus min/max (20Hz–20kHz)	3.4ohm @ 116Hz 18.5ohm @ 45Hz
Impedance phase min/max (20Hz–20kHz)	-64° @ 56Hz 31° @ 301Hz
Pair matching (200Hz–20kHz)	$\pm 1.3\text{dB}$
LF/HF extension (-6dB ref 150Hz/10kHz)	41Hz / 36.4kHz/37.0kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	1.2% / 0.2% / 0.3%
Dimensions (HWD)	1062x190x439mm