



# Power play

**MCRU's No127 loudspeaker marries a planar magnetic treble unit to multiple mid/bass units in a decidedly unusual design. Noel Keywood is won over by its sound.**

Initially – after measurement – I wasn't so sure about the thinking behind the No127 and the resultant engineering. In the end, however, I understood what the designer was getting at and was impressed by this loudspeaker – it is out of the usual mould.

What you get for £2495 is a largish floorstander measuring 1060mm high, 210mm wide and 310mm deep, the plinth adding a few centimetres to these dimensions. The speakers are built to order and ours came with an attractive matt, oiled finish in a teak natural-wood veneer. Weighing 28kgs they feel heavy and solidly built, but are not so heavy as to be immovable. Rubber feet come fitted to the base for convenience but MCRU prefer spikes to be used for stability, screwed into threaded inserts.

The rear carries a conventional bi-wire panel with links that separate the tweeter from the array of bass/mid drivers. Optional black cloth grilles attach to the front with magnets, covering the un-lovely array of bass/midrange units.

A tad worried by what I was measuring – I wondered whether they might be mis-wired – I spoke to designer Scot to discuss what was going on. He told me that one of the primary design

aims was to get quality bass from a narrow cabinet, explaining the four bass/midrange units you can see in our pictures. Each unit works less hard for the same acoustic output as single or double bass drivers, lowering cone excursion and distortion. This arrangement costs more, but it delivers the goods. At least it does in the No127 I found.

That's design aim No1 dealt with. No 2 was to use a high-quality tweeter to obtain clear, concise treble. For this MCRU have employed a planar magnetic treble unit that fires into a shallow horn to improve air load matching and lateral dispersion.

That's all very well but as I found out long ago, experimenting with a Tonigen ribbon tweeter, they don't reach down far enough to match cone drivers cleanly. Just as bad, crossover wavelengths are so short the mechanical size of the drive units obstructs smooth phase matching – and there's little you can do to avoid this.

This explains what I found with the No127 and why I was concerned about it: the treble unit does not reach down far enough to match the bass/midrange units – there's a gap between them. Suspecting the tweeters were mis-wired out-of-phase, which would cause such a dip, I phoned the designer. Scot told me they knew about this and that, if the tweeter had its phase reversed, the gap would fill in a little, but not completely; in listening tests they liked it the way it was. Which brings us to the role of the rear tweeter.

The rear panel carries a fabric dome tweeter, complete with associated volume control that can adjust its output right down to zero. Turned up to maximum, this helps fill in the gap I have been talking about, whilst also adding ambient treble into the room to add an airy effect. This isn't a wild idea; it has been done before in many loudspeakers, including the Castle Howard and models from Sonab.

Scot also confirmed, as I had found from measurement, that the No127 measures best at a distance, where it integrates well. But this is not a major issue in use, I found; they sounded fine just 3m away and little different further out, ignoring inevitable room influence that becomes stronger at a distance.

So to summarise, the No127 has four bass/midrange units to provide



strong, clean bass, a planar magnetic tweeter for good quality treble and a rear fabric dome tweeter to match the former to the latter, plus add some 'air' into the sound. This combo gelled very well in unexpected areas, making the No127 stronger than it seems.

Firstly, the No127 produced a massive 91dB sound pressure level from just one Watt. That's as much as big Tannoys and is an impressive result. You can use a 9 Watt Single-Ended valve amplifier with them and not be short of puff. With this sort of sensitivity 20 Watts will blow you across the room.

So the No127 is right up the list for audiophiles with special amps. The only caveat is that they must be happy with a 4 Ohm load; most modern transistor amps are, but older/crappier ones distort more at low levels, so are best avoided. Valve amps must have a 4 Ohm output.

Secondly, the No127s have a wide stretch, from low bass right up to high treble – and this was

reflected in their sound.

Thirdly, they are basically accurate and well balanced. They need a largish room to work in, but then so do most large floorstanders. By large, think 16ft long or more. The rear tweeter is very exposed and I touched it lightly a few times when making adjustments and moving the speaker around; it needs a protective grille.

The level control was effective in changing the sound, giving a useful range of adjustment. I found zero made the 'speaker unacceptably midrange-dull and ended up setting it just a tad off maximum in order to maintain midrange insight and detailing.

## SOUND QUALITY

Spinning Jackie Leven's 'Young Male Suicide Blessed by Invisible Woman' on LP showed a raft of strengths. Drums were punchy, clean and tight; there's no sloppiness or inflation in the bass, but the 'speakers have good bottom-end punch.

The ethereal voice of the 'invisible woman' drifted freely around the cabinets, aided by the rear tweeter. Yet at the same time the forward firing planar tweeters have strong enough high treble to give sharply defined stereo images across the soundstage putting Jackie right on the spot, centre stage.

This all worked well; often loudspeakers that throw treble around the room sound diffuse, unable to bring focus to stereo images. The No127s avoid this, but they do so partly by having quite strong treble from their forward-firing tweeters. Turning the rear tweeters down does help ameliorate this but it also suppresses detail and insight so I was reluctant to turn them down too much. The forward firing planar tweeters peak at 16kHz and this gives treble bite – but quality was good. I never winced at this, at least not with our Ortofon 2M Black MM cartridge feeding an Icon Audio PS3 valve phono stage and Quad QMP monoblock power amplifiers.

With Mark Knopfler's 'True Love Will Never Fade', again on LP, the No127s nicely revealed the acoustic bass line, sounding clean, wide-band and punchy. Knopfler sounded a wee bit chesty; there was a little box colour in the mix but this made the No127s sound fulsome rather than anything worse.

Moving over to digital and Mozart's 'Ave Verum' (24/192) playing

from my Astell&Kern AK120 portable digital player through our Audiolab M-DAC, the No127s imparted a suitable sense of scale, deep organ notes coming across as solid and well defined; these 'speakers really do have quality bass.

The choir stretched broadly across the end of our listening room, in an image that moved beyond the outer edges of the loudspeakers. This gave an expansive quality to the performance, which suited it well, yet at the same time there was enough focus to pick out the choral sections. With no upper treble in the recording, the No127s sounded generally large, powerful yet smooth.

With standard rock having plenty of not-so-sweet upper treble, meaning Tom Petty's 'Refugee' (24/96), drums had punch and upper treble was obvious but not overpowering, tweeters up full. Petty sung from a stage that had a good sense of depth to it and the Hammond organ swirled around clearly. It was a gutsy, smooth, fast-paced and impressive performance.

Harmonica in Marta Gomez's Lucia (24/96) also had a nice



free quality to it, floating in space seemingly unanchored to the physical loudspeaker cabinet, yet as an instrument it was rich and full bodied: it was a very attractive presentation. The No127s also time very well, making explicit the Latin tempo of this song.

## CONCLUSION

The longer I listened to the No127s the more I liked them. They've been

honed to produce a beautifully balanced, tightly-controlled sound with the bass depth and dynamic punch so many of us crave. There's no flabbiness, no excess and no overhang; they're temporally tight, relaxingly clean in the time domain and yet viscerally strong too. They have a masterful balance here and there was a lot of freely-offered praise from other listeners at Hi-Fi World towers – always a good sign! This is how you want and hope a loudspeaker might sound.

Weaknesses? Treble from the forward-firing planar magnetic tweeter could be smoother perhaps, but I suspect most listeners will like their 'bite' as it is. This was no big issue.

On balance, I felt the No127s had a great sound and were exciting with both rock and classical. Big sounding, with clean, deep bass and a wide open soundstage, going very loud with ease from a few Watts they have a raft of strengths rivals at double the price struggle to match. I thoroughly enjoyed them, coming away impressed. These are speakers definitely worth hearing.

## MEASURED PERFORMANCE

Close up, at or within the usual 1 metre limit of the measuring microphone, the MCRU No127 did not look so good, due to a large dip in its frequency response between its treble unit and top bass/midrange unit, around 1.5kHz.

This looked like a phase dip, suggesting the tweeter was connected out-of-phase. Reversing tweeter phase lessened the problem, producing a flatter midrange, but did not eliminate it. Turning up the rear tweeter output to maximum helped fill in to a useful degree also, but again it did not eliminate the dip completely. It is an amplitude dip – meaning the bass/midrange unit is unable to reach the lower limit of the magnetic planar treble unit.

The measuring microphone had to be moved relatively far (1.5 metres) from the No127 before it started to look integrated, meaning it integrates best in the far field. That's not a problem in real life because most people sit 3 metres away or more but it is worth noting. The dip means that, subjectively, there is no midrange harshness, softening out the sound a little. The fill-in from the rear tweeter is ambient energy that contributes to midrange in particular, and this was audible in use; turn the tweeter down and the dip gets larger.

Our published frequency response

curve otherwise shows strong upper treble output from the planar tweeter, a slightly lumpy lower midrange due to internal cabinet resonances seen in the red port trace, and both strong and extended bass that reaches down to 30Hz with ease. The bass peak at 80Hz will ensure bass is both obvious and 'fast'.

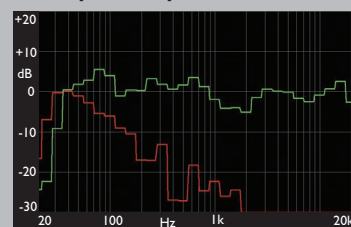
The port is well damped and works around 40Hz, having reasonably strong output. It will add to deep bass heft.

The four bass/midrange units

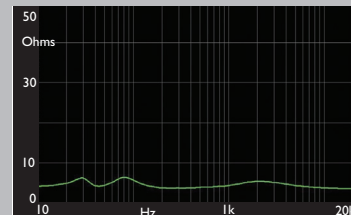
### FREQUENCY RESPONSE

Green - driver output

Red - port output



### IMPEDANCE



present a lot of cone area and move air well, helping the No127 produce a very loud 91dB from one nominal Watt (2.8V) of input, although a low measured impedance of 4 Ohms helped toward the figure. The No127 will go very loud at low volume settings of transistor amplifiers as a result; valve amps must have a 4 Ohm tap. High powers are not needed, 40 Watts being more than enough for high volume.

As a load the No127 is impressively resistive; it has none of the reactive elements of most loudspeakers, so is a good load. Whilst low impedance suggests high current draw, high sensitivity means the opposite; the speaker is efficient and will be easy to drive.

A 200mS decay spectrum showed quite a lot of bass overhang from what appears a lively cabinet, but overhang is always greater when a loudspeaker produces strong bass from a compact cabinet.

The MCRU No127 is very distinctive when measured. It is wideband, has strong upper treble, powerful bass, is extremely sensitive so needs little power.

It will well match any amplifier able to drive 4 Ohms. Sound quality will be 'impressive' with this combination of properties. **NK**

## MCRU NO.127 £2495.



**OUTSTANDING** - amongst the best

### VERDICT

Powerful, wide-band sound, with firm deep bass and precise treble, the No127s are exciting to hear. Temporally clean and well-defined, they have pace, as well as bass.

### FOR

- punchy sound
- need little power
- go loud cleanly

### AGAINST

- unprotected rear tweeter
- strong high treble
- some midband warmth

MCRU

[www.mains-cables-r-us.co.uk](http://www.mains-cables-r-us.co.uk)