

“A Killer

COMBINATION.”

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**audio
 ideas
 guide**

by Andrew Marshall

Sometimes the real high performance bargain in speakers comes not in a pair, but in a trio. That’s certainly the case here, as we look at what is a very affordable investment for a system that is very linear, and provides bass extension to below 30 Hz at wall- and floor-shaking levels. But perhaps I’m getting a little ahead of myself in my enthusiasm.

The Monitor 7 is part of a new series with some models that contain powered subwoofer sections. The Monitor 90P was reviewed recently in these pages (Smr 97). The Monitor 7 is smaller, a floorstanding speaker that might benefit from short stands to get the tweeter closer to seated ear height. The pair is finished in black ash vinyl, and has a dual bi-wire set of plastic-nut gold-plated binding posts at bottom rear.

Drivers are a PTD™ pure titanium dome tweeter that is ferro-fluid cooled, matched

with a pair of 6-1/2” injection-molded co-polymer polypropylene cone bass-midrange drivers, with die-cast baskets designed to use convection to dissipate voice coil heat. The crossover is 3rd order electro/acoustic at 1.8 kHz, according to the Paradigm website [www.paradigm.com]. Sensitivity is said to be 92 dB in-room.

The PS-1200 subwoofer is a bandpass type, and the model here is the second generation, with a new woofer that has a die-cast basket instead of the previous stamped steel one; this



The New Monitor 7
 (Improved over version reviewed for even better sound.)

“... the midrange was very smooth and detailed, unusually so for a speaker this inexpensive. The Monitor 7 also offered excellent dynamics, clean and fast on percussion, with no splashiness on cymbals. ... superbly balanced ...”

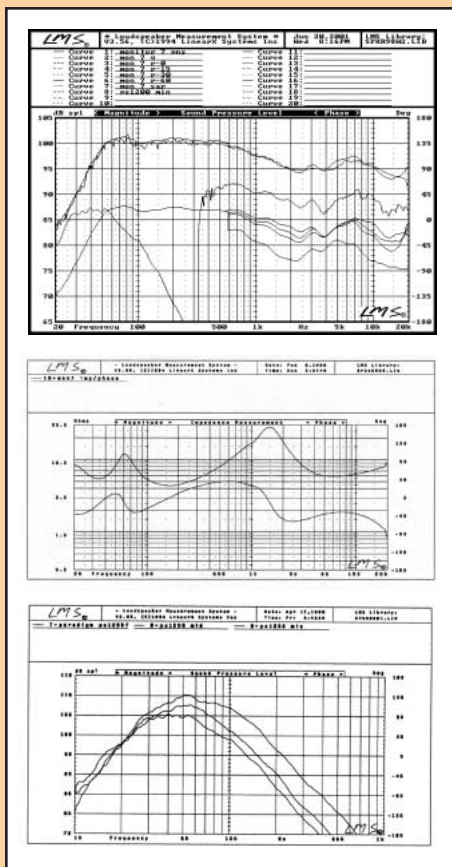
is said to allow greater power handling and, hence, dynamics. The actual 12" woofer is inside the cabinet, the bass vented by three large ports on the cabinet side beside the amplifier control panel. The cutaway drawing shows the actual construction of the box. Controls are provided for level, phase, and crossover frequency, all continuously variable, the latter's range from 50 to 150 Hz. I must confess some fondness for this subwoofer in its original form, having had one in my home theatre system for almost two years.

"The PS-1200 is easily the best subwoofer I've yet seen for under \$1,000 and offers flatter response, greater extension, and better dynamics than its predecessor ... tight punchy bass ... well damped ... always very much under control."

Both speakers measured impressively, the Monitor 7 showing a slightly downward trend with increasing frequency in both Pink Noise Sweep (PNS) and Summed Axial Responses (SAR), not a bad thing in a speaker that's likely to be used at closer listening proximity in smaller rooms. The fact that the two dissimilarly derived measurements so precisely overlay each other is also a good thing, in that it bespeaks excellent dispersion and uniformity of radiated frequency response.



The New PS-1200
(Improved over version reviewed for even better sound.)



"... excellent dispersion and uniformity of radiated frequency response. Impressive ... when the subwoofer is added, response extended in exceptionally linear fashion to about 25 Hz."

The quasi-anechoic measurement shown is also very smooth, with a slight midrange dip, and the axial curves underneath show virtually identical radiation to beyond 30° off axis. Because radiation at 60° is down in level several dB, this speaker will not interact excessively with side walls, also a good thing in smallish rooms. Overall, this budget speaker is within a $\pm 2\text{-}1/2$ dB range of response from 50 to beyond 10 kHz. Impressive.

Even more impressive is the lower end response seen on the axial curve when the

subwoofer is added, response extended in exceptionally linear fashion to about 25 Hz. Here I have set the PS-1200's upper rolloff to match the 50 Hz one to the Monitor 7, which makes it operate as a subwoofer in the truest sense.

"... very well balanced in midrange and treble, with a clarity that allowed precise lateral imaging and good depth ... very smooth bass response ... sweet string sound, with excellent articulation of brass. Female voice – very natural and clear ..."

Looking at the impedance/phase curves, we see a range between 4.5 ohms (150-200 Hz) and 28 ohms (1500 Hz), which suggests that more current will be better than less, but that any decent receiver or integrated amp should drive this speaker well. Electrical phase varies over about 90° near crossover, but this is typical of budget speakers, and will pose no problem for amplifiers, either.

Looking at the frequency response curves for the PS-1200 (note that the bottom of the scale starts at 10 Hz here), we find the flattest response at the lowest crossover setting, within a dB from below 30 to 60 Hz. At mid rotation there's a bump between 40 and 70 Hz, while the full rotation to the 150 Hz setting is smoother over a wider band, $\pm 2\text{-}1/2$ dB from 30 to 100 Hz. Like most bandpass subwoofers, this one rolls off quite quickly below 30 Hz, with little energy below 20. Unlike the mighty Servo-15 (Wtr 97) the PS-1200 won't upset your turntable with subsonic energy.

Given the praise heaped on Paradigm's recent generation of speakers (and the drivers in them designed and made in-house by the company), and the measured performance seen here, it's

almost superfluous to discuss the sound of this 3-part system (And, I should note that it was my idea to match the Monitor 7 and PS-1200). But listen we did, and were not disappointed.

“ ... make a point of auditioning the Paradigm Monitor 7 and PS-1200. Put simply, they’re a killer combination.”

Paradigm has chosen wisely to shelve the upper octaves in this speaker a little in its overall response, since the Monitor 7 is likely to be used in smaller rooms at closer quarters and could otherwise seem a little brash. Auditioned in our home theatre room at about an 8-foot distance, its sound was very well balanced in midrange and treble, with a clarity that allowed precise lateral imaging and good depth. The PS-1200 provided a foundation that was solid down to just below 30 Hz, and I preferred to run the Monitor 7’s full range (as measured) because of their very smooth bass response.

I heard a nicely sweet string sound, with excellent articulation of brass. Female voice and the artificial ambience on Mary Black’s *No Frontiers* were very natural and clear, respectively; you could really tell it was a ghost, or an echo at least, in a machine. In general, the midrange was very smooth and detailed, unusually so for a speaker this inexpensive. The Monitor 7 also offered excellent dynamics, clean and fast on percussion, with no splashiness on cymbals.

The only hint at a shortcoming was in the area of soundstage depth, the Monitor 7 not providing as much sense of things going on behind the speakers as some more expensive models. Diffraction may be a factor here; though the tweeter has a lens on it and a gently flared surface around it, as is the outer surface of the grille cover, the baffle board may still be re-radiating some treble energy. But in all

other areas the Monitor 7 is a superbly balanced budget loudspeaker.

The PS-1200 is easily the best subwoofer I’ve yet seen for under \$1000, and offers flatter response, greater extension, and better dynamics than its predecessor, these probably due to a redesigned driver. It’s a particularly good A/V sub, its tight punchy bass working well with soundtracks, and the well damped driver always very much under control. For music listening, I’d like another half-octave of extension, the PS-1200 not able to operate in the range of hall low-frequency ambience between 16 and 20 Hz. But, then, that’s something you get only with large, expensive speakers, and here we’re reviewing an almost-full-range system at a very affordable price. If you’ve got a limited amount to spend, make a point of auditioning the Paradigm Monitor 7 and PS-1200. Put simply, they’re a killer combination.