



MKSound SB8

SUBWOOFER

I have titled the SB8 a 'subwoofer' in this review because MKSound in Denmark does, and so does Qualifi, its Australian distributor, and so do all MKSound's retailers right around the world, but I personally don't regard the SB8 as a *subwoofer* (note the emphasis on the prefix 'sub') because, for me, a subwoofer is a low-frequency loudspeaker that delivers its maximum energy in the octave from 15Hz to 30Hz. The MKSound, on the other hand, delivers its maximum energy in the octave between around 50Hz and 100Hz. Indeed even MKSound's brochure says of the SB8 that: *'The sealed deep bass enclosure design delivers enhanced low frequency extension, especially for a cabinet this size, with useful output down to 30Hz.'*

THE EQUIPMENT

So what would I call the MKSound SB8 if I'm not going to call it a subwoofer? I think

it would be more appropriately called a *superwoofer* because it produces its maximum output at frequencies that would usually be delivered by the bass driver in a large three- or four-way floor-standing loudspeaker. But when was the last time you saw a pair of very large floor-standing loudspeakers? Precisely! Probably at a hi-fi show, or when you were last in your local hi-fi store, perhaps looking to buy a pair of loudspeakers. You likely marvelled at the quality and power of the bass from those floor-standers, but while you were doing that, your better half was probably sizing them up (literally!) and mouthing to you silently behind the salesman's back something along the lines of: *'There's no way we are having those things in my house!'* So the pair of you walked out of the store with a pair of very nice-sounding two-way bookshelf speakers that produce a wonderful midrange, fabulous treble, are small enough to be

almost inconspicuous in your room... and deliver just enough bass to let you remember what real bass sounded like!

Which is where MKSound's SB8 comes in. If you have a pair of perfectly serviceable small speakers, but you're longing after the deeper, more powerful bass you'd hear if you owned a pair of large floor-standing speakers, the SB8 (or two of them!) will fit the bill. Also, because the SB8 itself is so small, you should be able to install it discreetly in your room without upsetting the décor... or your better half. Indeed the SB8 is so small you could easily get away with installing two of them if you really wanted! How small is the SB8? Glad you asked! It stands just 358mm high, is 255mm wide and 305mm deep. (And in case you're comparing these with MKSound's own specifications, my dimensions are correct: those in the four-colour MKSound brochure are incorrect!) I have included in

this depth the curvaceous solid metal grille (which protrudes a fair way out from the baffle, thanks to its curvature, and the row of solid aluminium heatsink fins on the rear panel, which extend around 40mm from the cabinet proper. This finning, obviously, cools the bipolar output devices in the internal power amplifier (whose output MKSound rates at 150-watts) but they also serve to protect the 240V power plug from being dislodged, in what I regard as a very neat piece of engineering. The number and size of the heatsink fins also betray the fact that MKSound has opted for good ol'-fashioned linear Class-AB amplification rather than the newer Class-D. I'm actually a fan of Class-AB, despite its wasteful power consumption, and recently my fanaticism has been more deeply entrenched by as-yet-unsubstantiated reports from the field that subwoofers using Class-D amplifiers are less than happy with the very high mains voltages that are common in some parts of Australia (more than 260-volts in some cases).

In true American fashion MKSound says the bass driver in the SB8 is '8-inches', but my measurement of the overall diameter of the chassis put it a little larger: 208mm. (MKSound was originally based in the US, but now calls Denmark home.) However, it's the Thiele/Small diameter of the bass driver that counts, because this dictates how much air the driver will move when it's operating, and my tape measure put this dimension at 160mm, which gives an S_d of 201cm². (S_d is basically the area of the cone that's available to push air.) The cone is quite interesting, because almost its entire diameter is occupied by an enormous dustcap (on which is emblazoned an equally enormous 'MK' logo). Both the cone and the dustcap are made of paper, rather than a petroleum-derived material such as polypropylene. Contrary to what most advertisers would have you believe, plain ol' paper is an extraordinarily good cone material, being extremely lightweight and incredibly rigid. If it has a fault, it's that it's hygroscopic, so its weight and rigidity can vary depending on the humidity of the air, but in the case of the SB8 MKSound has coated the paper to prevent this from happening. Also, the SB8 enclosure is totally sealed, so the air inside the cabinet is completely stable. Another advantage of the sealed enclosure is that because there's no hole in the cabinet (in the form of a reflex port) there is also no possibility of any 'chuffing' when you're playing very loud

music, which can sometimes happen with enclosures that have reflex ports.

The rear panel of the MKSound looks rather garish, because MKSound has decided to use its corporate colours (red and white, coincidentally the colour of the Danish flag) to identify the control functions and calibrations. On the plus side, the chosen colour scheme does make the lettering very easy to read! The SB8 provides both line- and speaker-level inputs and outputs, all of which are gold-plated. The speaker-level inputs and outputs are multi-way post-style connectors on 19mm centres, which means you can use dual-Pomona banana plugs to simplify installation, otherwise standard banana plugs or bare wires are fine. The line-level inputs and outputs are standard RCA fittings. Both the RCA and speaker level outputs have fixed high-pass filters fitted that start rolling off below the output at 400Hz, then attain a slope of 6dB/octave below 100Hz. I rather like the way MKSound has labelled the speaker-level terminals. Rather than use any of the usual arcane labelling schemes, which can be confusing, it has labelled one set of terminals 'To Speakers' and the other set 'To Amplifier'... can't get any more obvious than that!

Rather unusually, the MKSound SB8 has a tri-position slider-style power switch, so in addition to turning the subwoofer off, you can set it to be permanently 'on', or in 'auto-on' mode, where it switches itself on and off automatically in response to whether there's an audio signal at one of its inputs. A chameleon (multi-colour) LED alongside the power switch gives feedback on power status. I rather like the ability to 'force' a subwoofer to stay on all the time, yet in these power-consumption-conscious times, few manufacturers provide this option.

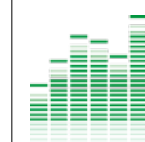
The SB8's low-pass filter is rotary, with a smooth action, and can be varied between a minimum of 40Hz and a maximum of 200Hz. However, if you rotate the control completely clockwise, it stops up at a position MKSound says is a 'Bypass'. Alongside the low-pass filter is a rotary level/volume control with only three calibrations: Min, 'Reference Level', and Max. The final user-adjustable control is a two-position slider switch for phase, which is marked '+' and '-' rather than the more usual and more accurate '0°' and '180°'.

The grille on the MKSound SB8 is unusual for two reasons. First, it curves outward, rather than being flat. Second, it's made of solid steel

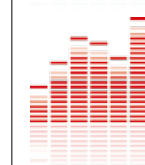
rather than the usual flimsy fabric-covered plastic or MDF frame. I think having a steel grille is a fabulous idea, because where are most people likely to place the SB8? That's right, on the floor! And if someone accidentally kicks it while it's down there, or runs a vacuum cleaner into it, what's going to happen? That's right, absolutely nothing... you won't even make a dent in the steel grille! Try this with any subwoofer with a standard plastic or wood grille and you'll not only damage the grille itself, but very likely the driver behind it as well!

MKSound SB8 SUBWOOFER

Brand: MKSound
Model: SB8
Category: Subwoofer
RRP: \$1,199
Warranty: Five Years
Distributor: Qualifi Pty Ltd
Address: 24 Lionel Road
 Mt Waverley
 VIC 3149
 ☎ **1800 242 426**
 ☎ **(03) 8542 1111**
 ✉ **info@qualifi.com.au**
 🌐 **www.qualifi.com.au**



- Very small
- No reflex port
- Solid grille



- Deep bass
- High pass filter not variable

LAB REPORT

Readers interested in a full technical appraisal of the performance of the MKSound SB8 Subwoofer should continue on and read the LABORATORY REPORT published on the page 114. Readers should note that the results mentioned in the report, tabulated in performance charts and/or displayed using graphs and/or photographs should be construed as applying only to the specific sample tested.



Lab Report on page 114

Another advantage is that your cat is unlikely to use the metal grille as a scratching post, whereas standard cloth grilles are often used for that purpose by family felines. Unusually, the base of the SB8 is the same high gloss piano finish as the rest of the cabinet, and there are no feet attached. Instead, four 'stick-on' plastic feet are included in the packaging on an 'attach-your-own-feet' basis... which I did, but only while I was thinking that I would have preferred MKSound to have fitted threaded holes so I could install spikes or some other form of bolt-on feet.

LISTENING SESSIONS AND PERFORMANCE

You have some decisions to make when installing the MKSound SB8 that primarily revolve around whether you use the MKSound's inbuilt high-pass filter. The first installation option (which I'll call Option A) is to connect run a second set of speaker wires from your amplifier to the speaker input terminals on the SB8 (you could use the 'Speakers B' terminals of your amplifier if you like... assuming they're not being used.) If you use this set-up method, your existing loudspeakers will continue to get the same full-range audio signal they've always had, but the MKSound SB8 will add additional bass below 200Hz. (And if you do use Speakers B, you'll be able to turn this bass reinforcement on and off simply by switching Speakers B on and off, which would be helpful when installing the SB8.)

An alternative installation option (which I'll call Option B) is to unhook your speaker wires from your existing amplifier and instead connect them to the 'To Speakers' terminals on the SB8. You'd then run the speaker wires from your amplifier to the 'To Amplifier' terminals on the SB8. If you use this hook-up method, the SB8 will strip out the low frequencies from the signals it sends to your speakers, so only the SB8 will be supplying bass below 200Hz. If you have two-way speakers, this will effectively turn them into three-way speakers, as they will be handling only the midrange and treble, while the SB8 will be supplying the bass. (Obviously the line inputs and outputs extend your installation options even further, but I'm not going to

go into these options other than to point out the obvious, which is that if you have an amplifier or receiver with a Subwoofer Output terminal, you could connect this to the Line input of the SB8.)

The installation option that will work best in your set-up is impossible to predict, because it will depend entirely on which speakers you're using in conjunction with the SB8 and, to a certain extent, where you decide to position the SB8 in your room... and also whether you're using one or two of them. The only way you will be able to discover which of the many options gives the best performance in your room—and with your speakers—and for your tastes—is by trying them all and seeing which works best. My feeling is that if you can position the SB8 roughly midway between your left and right speakers, Option B is likely to give the best results with most very small two-way bookshelf loudspeaker systems... including those made specifically to partner with the SB8, such as the MKSound MK5.


■ The bass extension of MKSound's SB8 is more than sufficient for all but a few musical genres...



I didn't have any MKSound MK5s to partner with the SB8, so I used a variety of small two-way speakers of varying sizes and brands, using both setup options with each, but with the SB8 always positioned midway between the left and right speakers in order to reduce the variables. Funnily enough, I found that despite my prediction, I mostly personally preferred the sound with the Option A hook-up. However, there wasn't much in it, and either way you will enjoy fast, and very tuneful bass. It's fast because MKSound is using a relatively small, lightweight cone and driving it with a powerful amplifier that's able to accelerate it very quickly. And when a signal stops, the cone also stops very quickly, because of the pressure of air inside the cabinet. (If the cone were in a bass reflex cabinet, it would not stop quite so quickly.) The smaller cone enables flatter and more-extended high-frequency performance which means that after I'd properly matched the SB8 to the satellite speakers, the overall bass response that resulted was very flat, so the balance of frequencies was excellent, with the SB8 contributing bass at exactly the correct level. Playing a variety of well-known bass tracks, however, revealed that although the response was flat above 50Hz, it rolled off quickly below 50Hz, so that 30Hz was about its

practical limit. However, when you consider that 50Hz is more than sufficient to reproduce the lowest note of an electric bass and 30Hz is the third-lowest note on a piano keyboard, you'll see the bass extension of MKSound's SB8 is more than sufficient for all but a few musical genres (the pipe organ springs most readily to mind).

CONCLUSION

If you're looking for an MKSound product to reproduce the infrasonic rumbles and low-frequency effects found on movie soundtracks, I'd recommend MKSound's SB1250, which I reviewed in Vol 43 No4, and which also happens to be the current holder of *Sound & Image Magazine's* 'Subwoofer of the Year' award (2013). However, if you're looking to extend the bass of any pair of small two-way speakers down to 30Hz, so you can get more realistic reproduction of music than you can with just a pair of small two-way bookshelf or standmount speakers, MKSound's SB8 would be an ideal choice. 

greg borrowman

CONTINUED FROM PAGE 34

TEST RESULTS

Graph 1 shows the frequency response of the MKSound SB8 as measured by *Newport Test Labs*, with the black trace showing the response with the crossover control set to 'Bypass' and the red trace the response with the control set to its minimum 40Hz setting. In the 'Bypass' mode, the frequency response of the MKSound SB8 extends from 38Hz to 300Hz ± 3 dB. You can see the maximum output is at 75Hz, at which frequency the low-frequency response rolls off, while above 75Hz, the response stays at pretty much the same level up to 220Hz, after which it rolls off. If you set the crossover control to 40Hz, the MKSound SB8's frequency response is 28Hz to 150Hz ± 3 dB. On this graph you can see the low-frequency response rolls off quite rapidly below 50Hz, while the high-frequency response starts rolling off above 80Hz. Between 50Hz and 80Hz, the response is exceedingly flat.

Graph 2 shows the nearfield response of the MKSound SB8's driver for six different settings of the crossover control. The black

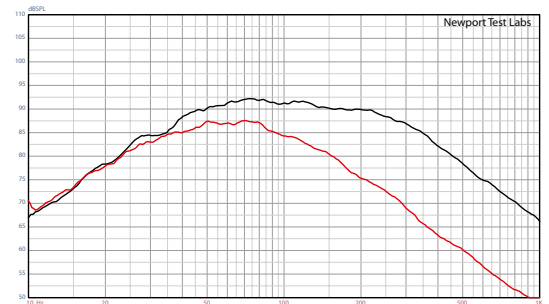
trace shows the 'bypassed' response and you can see that it isn't a true bypass: the crossover control is still in circuit. There's not too much difference between when the control is set to 'Bypass' and when it's set to 200Hz (red trace). When the crossover control is set to 80Hz and above, the subwoofer's maximum output occurs in the region 70–100Hz, however when the control is set to 60Hz, maximum output occurs around 50–80Hz, and with it set to 40Hz, at around 40–80Hz. The traces show the control calibrations don't quite line-up with the measured 3dB downpoints of the traces, but the differences are not great, and you'd be setting the control by ear anyway, not relying on the calibrations.

The frequency response at the line output (Graph 3) and speaker output (Graph 4) are shown for the 'Bypass' setting of the crossover control, but it doesn't change with different settings of the control:

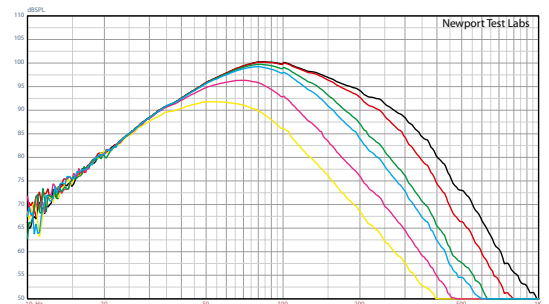
the high-pass filters are fixed. You can see the high-pass filter for the line output is flat all the way down to 200Hz, after which it rolls off sharply to be 10dB down at 50Hz. For the most part this is an 18dB/octave filter. The filtering on the speaker output is gentler, with the roll-off commencing at 500Hz, and the response 10dB down at 40Hz. This filter's slope is around 6dB/octave.

Steve Holding

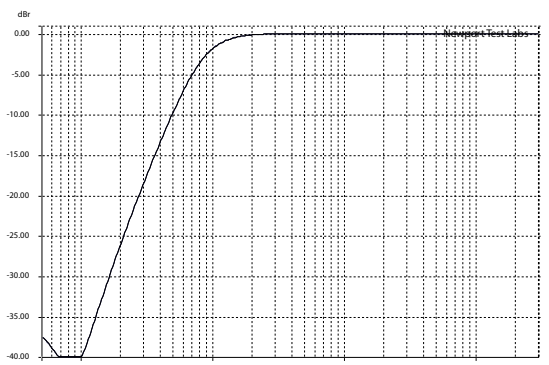
■ The frequency response of the MKSound SB8 extends from 38Hz to 300Hz ± 3 dB and between 50Hz and 80Hz, is exceedingly flat!



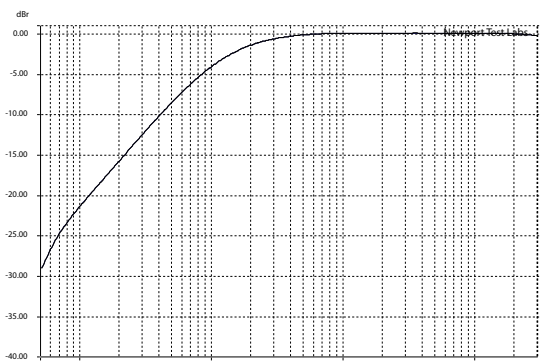
Graph 1. Frequency response, using pink noise test stimulus, third-octave smoothed via post-processing with crossover control set to bypass (black trace) and 40Hz (red trace). [MKSound SB8]



Graph 2. Nearfield frequency response of cone, with crossover control set to bypass (black trace), 200Hz (red), 120Hz (green), 80Hz (blue), 60Hz (pink) and 40Hz (yellow trace). [MKSound SB8]



Graph 3. Frequency response of line-level output with crossover set to bypass. [MKSound SB8]



Graph 4. Frequency response of speaker-level output with crossover set to bypass. [MKSound SB8]

NOW AVAILABLE ON ZINIO
for iPad, Android & PC/Mac

TOUCH US PINCH US

WE'VE ALL GONE DIGITAL

- ★ SOUND+IMAGE
- ★ AUSTRALIAN HI-FI
- ★ GEAR
- ★ CAMERA
- ★ PRO PHOTO
- ★ AUSTRALIAN INCAR
ENTERTAINMENT



Find the special three-issue
ZINIO SUBSCRIPTION RATES
at AVHub.com.au and
www.zinio.com/Hi-fi

