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# SVS PB-4000 Subwoofer Review

The delicate sound of thunder

by Steve Withers May 4, 2018 at 6:20 AM



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Specs

**User Reviews** 

Discussion (89)







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### What is the SVS PB-4000?

The <u>PB-4000</u> is the latest subwoofer from SVS and forms part of a new series designed to offer increased power compared to their 13-Ultra models, which this new range replaces, whilst also adding features previously only found on their <u>16-Ultra</u> models. The new range uses 13.5-inch drivers combined with 1,200 watts of digital amplification and, along with the ported PB-4000 we're reviewing here, includes the sealed SB-4000 and the cylindrical PC-4000. So SVS would appear to offer something for everyone in their new 4000 Series but if its heavy duty low-end action you're after then the PB-4000 is the sub for you. It isn't small but that's understandable when you're diving to such frequency depths and it isn't cheap, although £2,249 is actually quite reasonable when you consider all that the PB-4000 has to offer. So let's back up the forklift, put on the weightlifting belt and reinforce the home cinema, it's time for some serious bass.

# Design



We should probably get this out of the way up front: the SVS PB-4000 is big, really big. In fact it looks more like a black chest freezer than a piece of audio equipment. It measures  $595 \times 520 \times 763 \text{mm}$  (HxWxD) and there's nothing subtle about this subwoofer. It isn't going to blend into the surroundings and you'll need a decent sized room in which to install the SVS without it simply looking comical. It's also very heavy, weighing in at 69.5 kg, so you'll need to factor in the logistical aspects of simply moving the PB-4000. Thankfully SVS have designed some clever packaging that makes getting the subwoofer out of and, in our case, back into the box relatively straightforward. However the lack of handholds and a smooth



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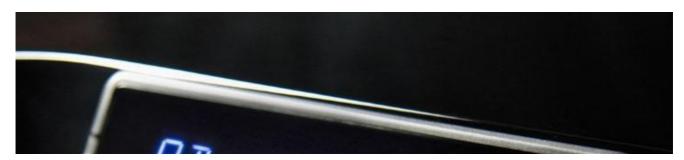
screen. For this reason the premium black ash alternative would be our preferred choice, although they're both the same price.



The PB-4000 is beautifully engineered and extremely well made using double thick MDF construction. It sits on large screw-in rubber feet that provide solid support, whilst the construction is incredibly inert, as you would expect from a subwoofer of this size and quality, meaning that if you needed to you could literally stand on the cabinet with no adverse effects. SVS have done their best to make the PB-4000 appear interesting but it's never going to be considered a looker. There's a removable curved non-resonant steel mesh grille, which basically makes the PB-4000 even bigger and three ports beneath the 13.5-inch driver for in-room tuning. Like the SB16-Ultra that we reviewed previously, there's also an angled front display with basic controls, bi-directional feedback and an 8-digit LED interface that thankfully can be turned off. You can set up the PB-4000 using these controls, the provided remote or a useful smartphone app that works over Bluetooth and allows you to set up, EQ and control the subwoofer from the comfort of the primary seating position.

66 It's important to factor in the size and weight of the PB-4000

Features and Specs





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In terms of features, the PB-4000 uses the same 13.5-inch driver found on the 13-Ultra range and this accounts of over 20kg on its own. It utilises a massive dual-ferrite magnet motor assembly in conjunction with an edge-wound 3-inch aluminium voice coil and lightweight, rigid composite cones. This is combined with SVS's proprietary injection-moulded gaskets and long-throw parabolic surrounds to deliver extreme bass excursion and high sound pressure levels over a long operating life.

The PB-4000 also uses a Sledge STA-1200D amplifier, which is rated conservatively at 1,200 watts RMS but can deliver up to 4,000 watts of peak power, thanks to an efficient high-current Class D design combined with a fully discrete MOSFET (metal-oxide-semiconductor field-effect transistors) output stage that is more reminiscent of a Class A/B design.

A sophisticated 50MHz high resolution Analog Devices DSP preserves accuracy and sound quality in any environment, whilst the room gain control measures the space around the subwoofer and tailors the roll-off slope to optimise room extension while maintaining frequency response accuracy for deep bass without boom.

The PB-4000 has three bass ports beneath the 13.5-inch driver and SVS have included foam plugs that can be used for port tuning. Depending on how you use these foam plugs there is a choice of three tuning modes: standard, extended and sealed. This allows for finer inroom response calibration according to both the environment and personal tastes. If you leave all the ports open that's the standard tune with the highest maximum output; if you plug one of the ports that's the extended tune with deeper extension but slightly less maximum output; and all three ports plugged is the sealed tune which offers the best transient response. For our testing we mainly used the PB-4000 with all three ports open but we did experiment with one and then all three ports plugged.





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The subwoofer also has Advanced Limiting, which allows the amplifier to operate to the limit of its rated power in order to maximise system potential in larger spaces. In addition, active Power Factor Correction (PFC) serves as a line conditioner, surge suppressor and voltage regulator to accommodate wide voltage fluctuations in the household supply and eliminate the potential for ground loop noise in order to enhance audio transparency.

SVS have built the PB-4000 using a double thick MDF front baffle and added rigid internal bracing to support the drive unit, thus ensuring an acoustically inert environment. There's a high density cast aluminium basket which creates a reinforced internal design that should eliminate any colouration or resonance from the cabinet.

The connections are on the rear panel and here you'll find XLR and RCA stereo inputs and outputs with an ultra-wide input voltage for consumer and professional applications. There's also a three-pin socket for the power cable and an on/off switch. Unlike most subwoofers, there are no controls at the rear, replaced by a menu driven system that can be controlled from the front of the sub, via the smartphone app or using the provided remote.

This credit card sized IR remote control includes buttons for volume, up/down, back and enter, along with the presets and a brightness control for the LED display. The free smartphone app is available for iOS or Android and works over Bluetooth. This app controls all DSP functions including volume, low pass filter, phase, polarity, room gain, port tuning, three custom presets and system settings. An integrated 3-band parametric EQ allows for precise frequency and Q factor adjustments down to the single Hz level with four different slopes. Two-way feedback shows updates in real time on both the app and subwoofer interface.

**66** SVS have trickled down many of the specs and features found on the 16-Ultra Series

Setup and Operation





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In terms of setup we positioned the PB-4000 at the front of our dedicated home cinema between the centre and front left speakers, although it did rather stick out, so you may consider putting it to the side. Make sure you have help when installing the subwoofer and that you have sufficient space to position it properly. There is often a degree of compromise when positioning a subwoofer, with many rooms only offering a limited number of options. However if you have a reasonable amount of freedom when it comes to positioning the sub, you could place it at the sweet spot and, whilst playing a test tone, gradually move around at the front of the room until you find a good spot. This approach makes sense when you consider the sheer weight of the PB-4000 and saves you from having to physically move the sub to different locations. Ideally you want to choose a location where there is neither a peak nor a dip in the bass but rather a smooth response throughout the room.

Once you've positioned and connected the SVS then you can set it up and although you have three different ways to do this, the smartphone remote app seems the best option. It's well designed with an intuitive user interface and was quite stable over Bluetooth. There is a home page that allows you to set the subwoofer volume and turn the subwoofer display on or off. You can also access a range of options from which you can select Home/Volume, Low Pass Filter, Phase, Polarity, Parametric EQ, Room Gain Compensation, Presets and System Settings. For each of these options there is an additional help page that explains what the feature does and how best to set it. You can set up the sub so that it is On (which is the default), in Auto (which means it comes on when there's a signal) or you can use a Trigger as part of a controlled system. In terms of the display you can set it so that is shows the Volume (the default setting), you can set it so that it shows the SVS logo or you can turn it off. If you have the display on, you also have the option to add a time out from 10 seconds (the default setting) to 60 seconds.





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Low Frequency Effect (LFE) channel. If the low pass filter is on then you can set the frequency at which the sub crosses over with the main speakers and you can adjust the slope at which the low pass filter rolls off (the default is 12dB). There's also a Phase control,

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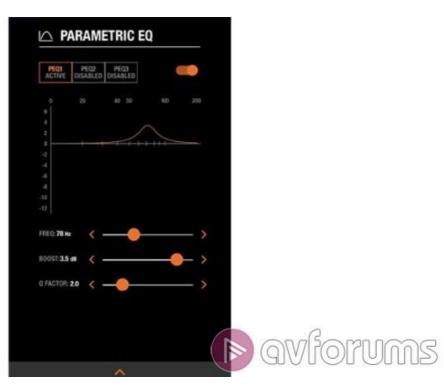
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which allows you to shift the timing of the subwoofer output to align with the main speakers or additional subwoofers, and a Polarity control that allows you to reverse the electrical polarity from positive (default) to negative if necessary. The Room Gain Compensation control allows you to adjust for excessive sound wave density in smaller rooms by reducing the bass at either -6 or -12 dB per an octave, below a frequency that is adjustable from 25 to 40 Hz. You do this by turning the room gain compensation on or off and adjusting the high pass frequency and the adjustment slope (12dB is the default setting).

There's also a Parametric EQ control with three EQ adjustments that you can use to compensate for peaks and dips in the acoustic signature of the room that couldn't be avoided during initial placement. Each of these EQ adjustments can be set for Frequency between 20 and 200 Hz in single Hz increments, for Boost in a range that goes from +6 to -12 dB, and for Q Factor (bandwidth) from 0.2 to 10. You can create presets as well with the option of no preset, a Movie preset for when using the SB16 with film soundtracks (which introduces a mild bass boost), a Music preset for listening to two-channel music with a subwoofer (which is flat) and a Custom preset if you'd rather create one of your own. About the only thing the PB-4000 lacks is an auto EQ feature but you can make adjustments manually if you have a calibrated microphone and audio spectrum analyser software.

**66** Setup and operation is simple but there's plenty of opportunity for tweaking as well

### Performance





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almost immediately during the opening credits and the SVS loaded the entire room with low frequency energy in a breathtaking fashion. There was a subsonic impact to the bass notes that you simply felt rather than heard and we were immediately aware of a previously unnoticed rattle in our room. After some judicious application of Blu Tack the rattle was

eliminated and all that was left was pure bass heaven.

Of course when you consider the sheer size of the PB-4000 with its huge cabinet and 13.5-inch driver, we would be amazed if it wasn't capable of mining some seriously deep bass. However what is really impressive is how the SVS is able to deliver all this low frequency energy with such precision and control. There was a responsive lightness of touch that we would expect from a sealed subwoofer rather than one that's the size of a compact car but somehow the PB-4000 was capable of an impressive level of finesse.

We put on <u>Kong: Skull Island</u>, another film with no shortage of bass, and the PB-4000 kept pace with the action admirably. It delivered wonderful low-end impact to Kong's footsteps and breathing, whilst also adding a percussive kick to gunfire and explosions that was utterly visceral and gave everything a suitable sense of sonic scale. <u>Pacific Rim</u> falls into the same category as <u>Kong: Skull Island</u>, only this time it's giant robots against huge monsters, but in audio terms we get the same titanic sound mix with thunderous bass.

We then moved on to <u>Dunkirk</u>, a film that boasts our current favourite soundtrack, a beautifully designed affair that makes full use of low frequency effects (LFE) where necessary. Whether it's the explosions caused by the Stuka dive bombers or the heavy machine guns in the wings of the Spitfires, the PB-4000 was there to give everything a solid foundation of bass. There are some lovely LFE moments as a ship is torpedoed and sinks that really draw you into action, heightening the tension and scaring the audience.

Although the PB-4000 could handle the bass in these more aggressive soundtracks, there's always a danger that a subwoofer this size could over-power more subtle mixes. Whilst the bass delivered by the SVS had plenty of underlying force, it was never blunt in its application. Instead there was a crispness and clarity to the bass, coupled with a sense of delicacy and responsiveness that is a testament to the engineering inside the incredibly inert cabinet.

The ability of the PB-4000 to stop and start on a dime was genuinely impressive when you consider the size of this beast but it means that even with a music-based soundtrack like <u>La La Land</u>, the SVS doesn't seem heavy handed. In fact it revealed a surprising level of musicality that we simply weren't expecting. The hand-off between the PB-4000 and the rest of our system was seamless and the integration was flawless, allowing notes to go from the bottom to the top with ease. We would expect anyone buying a ported sub like the PB-4000 to be looking for serious low-end performance but it's ability to handle music means that it isn't limited to film soundtracks.

A film that combines both low frequency effects and music in a wonderfully creative fashion is <u>Baby Driver</u> and here the PB-4000 really showed it potential. The bass-heavy moments such as car crashes or heavy calibre gunfire were handled with power and precision, whilst the music was delivered with a pleasing degree of subtly. Once you combined this controlled



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many modern films but it does so in a way that feels organic rather than forced.

■ The PB-4000 delivered incredibly deep bass coupled with precision and control

# Conclusion





OUT OF

# **Pros**

- · Superb bass performance
- Very low distortion
- Great smartphone remote app
- Flexible setup and control
- Extremely well made

# Cons

- · No auto EQ
- · It's really big and heavy

☐ You own this	♣ 1
☐ You want this	<b>å</b> 3
□ You had this	<b>.</b> 0

# SVS PB-4000 Subwoofer Review

If you're looking for subwoofer that can deliver incredibly deep bass in a controlled and precise manner than look no further than the SVS PB-4000. This huge ported subwoofer can produce subterranean levels of bass but does so with a surprising level of subtlety and grace. As a result the PB-4000 retains a degree of responsiveness and musicality that



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big bass moments with a visceral sense of scale but it never feels forced, retaining an organic cohesiveness that's a joy.

higher-end 16-Ultra range. This means the PB-4000 is a bit of a bargain when you consider its build quality, features and performance, making it hard to really find fault. It's fair to say that the size of this sub means it won't be for everyone and there's no auto EQ feature, which means for an optimal setup you may need to do certain things manually. Although if the physical dimensions of the PB-4000 are an issue then there's the excellent sealed SB-4000 and if space is at an absolute premium the cylindrical PC-4000 is also an option. However, overall the SVS PB-4000 is a beautifully engineered and superbly performing subwoofer that comes highly recommended.



# SVS PB-4000 Subwoofer (2018) Information Hub

Suggested retail price when reviewed: £2,249.00

# The Rundown

Sound Quality

**Build Quality** 

Value For Money

Verdict

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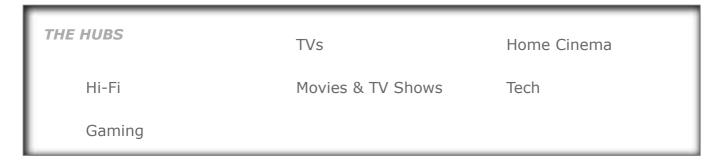
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