



SW Series subwoofers

Wharfedale

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Introduction

The SW series of subwoofers offer a level of performance previously unheard of in their class. Revolutionary drive units, amplifier modules and filter stages feature on every model.


They strike the perfect balance between power and sound quality, offering remarkable sound pressure levels, yet retaining enough control to be considered audiophile in quality. This is possible only through the use of some space-age materials and cutting-edge technology in our drive units.

Solid, well-engineered power amplifiers, dedicated to the production of low frequency energy are used across the range. Power is targeted specifically at the most important section of the bass spectrum, with very little loss and a controlled roll-off allowing for superb integration with all hi-fi and home cinema systems.

The filter section controls the integration with your main speakers and ensures the transition is seamless. Designed using six discrete circuits, signal purity is regarded as paramount. Each circuit has a different crossover frequency (35Hz to 85Hz in 10Hz steps). The filter is 12dB/octave on the SW-150 and 24dB/octave on the larger models.

In each model it is possible to switch off all filters and allow the AV processor to control the effective frequency range of the subwoofer. This is preferable in high-end systems.

Finally, the Tri-lam cone is revolutionary in terms of technology and performance. Detailed elsewhere in this brochure, it is one of the most advanced cones ever seen in a moving-coil loudspeaker, coupled with an elongated voice coil with a maximum excursion of 24mm.



The SW-150, SW-250, SW-300 and SW-380 subwoofers represent the state-of-the-art in home cinema subwoofers. With large format drivers and very powerful amplifiers, they are able to reproduce the true dynamics and scale of the original recording without compromise.

The larger SW-250, SW-300 and SW-380 models feature a unique curved cabinet, which not only improves aesthetics, it also significantly increases the overall rigidity of the cabinet, reducing resonance and overhang to almost negligible levels.

An advanced microprocessor controlled filter section on all models preserves optimum signal purity, whilst offering the consumer the best possible user interface. The larger models also feature a full remote control, and four programmable memory settings, allowing customisation of crossover, phase and volume, all from the users listening position.



Home Cinema or music?

A good subwoofer is the cornerstone of any home cinema system. DVDs are invariably recorded with the bass channel (the .1 section of a 5.1, 6.1 or 7.1 soundtrack – also known as the 'LFE' or Low Frequency Effects channel) as a complete discrete channel.

Even what you might consider to be 'large' front speakers are not suitable for reproducing this channel. A dedicated subwoofer is essential to appreciate the full scale of the recording as the effects in the 'LFE' can easily overload even the largest domestic loudspeakers and amplifiers.

Many home cinema systems are compromised by the quality of their subwoofers. Ours are designed to cope with the most demanding soundtracks with grace, dignity and plenty of authority

Increasingly, customers are looking to integrate their systems for listening to music into their home cinema systems. For this, an exceptionally high quality subwoofer is required. Whilst it is a simple job to make a subwoofer that produces lots of bass, making that bass tuneful and avoiding the single note 'drone' than many subs are guilty of requires a thorough understanding of acoustics.

The SW series subwoofers have been designed as much with the audiophile in mind, as the home cinema enthusiast. Through their advanced technology, they achieve unbelievable levels of control, enabling them to integrate seamlessly into even high-end speaker systems, without ever being intrusive, yet adding a dimension to the performance you will previously have missed.

A good subwoofer is one which has a controlled frequency range, which continues the sound from the main loudspeakers into the bass area of the sonic spectrum. It should not be dominated by a single note, but remain as controlled and articulate as the rest of the system.

The two larger models, the SW-300 and the SW-380 both feature extended, low-resonance, sealed enclosures and profiled heat-sink designs.

As well as adding to the overall structural integrity of the cabinet, the curved side design is an attractive alternative to the standard square box design that has been the standard for many years.

Both models are fully remote controllable, with an auto-dimming graphic display indicating the volume level, phase and crossover frequency. Both feature our advanced 'Tri-Lam' cone and microprocessor controlled filter section.



The cuboid SW-150 and its larger brother, the SW-250 both offer a powerful response and excellent control. The SW-150 though is reflex-ported, hence needs a less powerful amplifier.

The forward firing SW-150 offers exceptional sound quality for a modest outlay. Awarded 'Product of the Year' from *What Hi-Fi?* magazine, it easily provides the best value-for-money available.

To integrate a music system and home cinema system in one package though requires a sealed subwoofer. This will give better control and timing, as well as a more tuneful response.

The SW-250 offers all of the features of the larger SW-300 and SW-380, yet in a smaller, enclosure - ideally suited to work with a wide range of stereo and surround speakers, including our own Diamond 9 series.



Driver Technology

As we design and manufacture our own drive units entirely in-house, we are able to design the perfect driver for each situation.

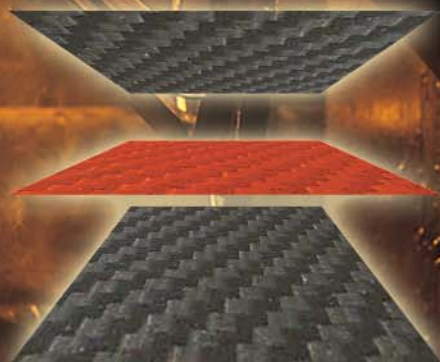
Our unique 'Tri-lam' technology produces drivers capable of delivering spectacular bass performance with distortion lower than any other drivers of similar size.

The aim of any large format driver is to have a linear pistonic motion with the minimum cone distortion and break-up possible, even when driven extremely hard. Our 'Tri-Lam cone' achieves this using a combination of Carbon fibre and glass fibre.

The cone material is a composite construction comprising of a hydraulically moulded and thermoset lamination of three layers.

The inner layer is bi-directional carbon weave, the outer two layers are a bi-directional glass fibre weave. In addition, the outer rim includes 'rim-edge stiffening' to further reinforce the resulting cone.

The result is a cone that is light yet incredibly strong, ensuring very low energy losses, even at extreme levels, and without the 'muddy' delays associated with lesser cone materials.



Bi-directionally woven glass fibre

Bi-directionally woven carbon fibre

Bi-directionally woven glass fibre



The 15" (380mm) cone used in the SW-380 is a marvel of modern materials science - completely pistonic, even under extremes of power and capable of SPLs equivalent to standing next to a pneumatic drill

Wharfedale's designers are the finest in their fields. And because we make every single part of every loudspeaker in our own facilities, we can control the quality of everything used.

Amplifiers & Filters

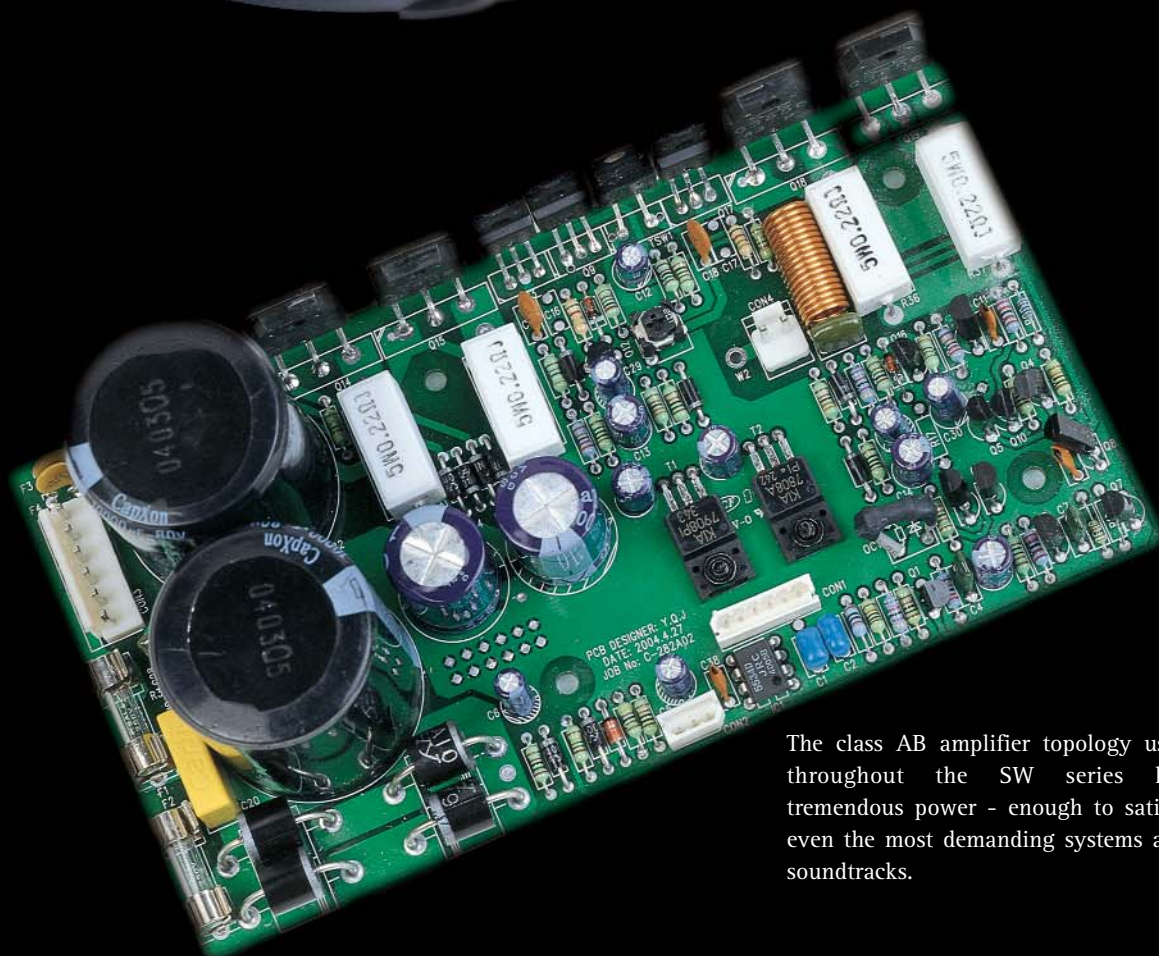
Good bass requires the ability to move large volumes of air with extreme precision. This demands a significant amount of power and dynamic headroom. The SW series subwoofers are designed with plenty of power to spare. A brand new Class AB amplifier has been specifically designed for the models. Very low distortion, exceptional headroom, and a high internal electrical damping factor provide accurate control of the speaker, for performance well above the specification.

Power is nothing without control, however. The SW-250, 300 and 380 subs use an advanced microprocessor controlled analogue low-pass filter section for sonic performance with a low noise floor. By minimising frequency overlap, fourth order, -24dB/octave filter slopes, ensure clean integration with full range systems in a wide range of applications. Low-pass frequencies are adjustable across six settings in 10Hz steps from 35-85Hz. Where a high quality A/V processor controls the subwoofer signal, it is also

possible to switch all filters off, or use a combination of both. The SW-150 uses the same filter path circuitry, but is manually controlled via switches on the rear of the unit.

In subwoofers of this quality, end users demand the best performance possible from their home cinema system, and also from their stereo music collection. With their flexibility and sophisticated control section, the SW-250, 300 and 380 provide four memory settings which can be used to store all of the calibration information for a range of uses, and these can be recalled at the press of a button.

The full function remote control supplied with the SW-250, 300 and 380 models provides the most user-friendly interface for set-up and adjustment. Users can, with the display on the subwoofer, set up the full system from the actual listening position and adjust the settings easily without having to move furniture or otherwise access the rear panel.



The class AB amplifier topology used throughout the SW series has tremendous power - enough to satisfy even the most demanding systems and soundtracks.

Their attractive design, flexibility, ease of integration and set-up and above all, their complete lack of overhang and distortion makes these reference subwoofers in every sense of the word.



The SW-150 and SW-250 models are ideal for integration into our award-winning Diamond 9 series systems. but they are really suitable wherever high-quality bass reproduction is important.

The larger SW-300 and SW-380 models are capable of quite astonishing performance levels and

are suitable for partnering with even extremely high-end loudspeaker systems.

Their attractive design, flexibility, ease of integration and set-up and above all, their complete lack of overhang and distortion makes these reference subwoofers in every sense of the word.



Model	SW-150	SW-250	SW-300	SW-380
Drivers				
Bass	250mm (10")	250mm (10")	300mm (12")	380mm (15")
Amplifier Power	150WRMS	250WRMS	300WRMS	600WRMS
Input impedance	10kΩ	10kΩ	10kΩ	10kΩ
Frequency Response	35Hz to 110Hz	30Hz to 110Hz	25Hz to 90Hz	35Hz to 95Hz
Maximum SPL (ref 1m)	107dB	108dB	114dB	120dB
Low Pass filter range	35–85Hz (10Hz steps)	35–85Hz (10Hz steps)	35–85Hz	35–85Hz
Size mm - including feet (H x W x D)	330 x 330 x 370	420 x 420 x 375	520 x 390 x 450	465 x 570 x 570
Size inches - including feet (H x W x D)	13" x 13" x 14.5"	16.5" x 16.5" x 14.75"	20.5" x 15.4" x 17.7"	18.3" x 22.4" x 22.4"
Features	0-180° phase switch Filter bypass switch Line and high level inputs Reflex ported	0-180° phase switch Filter bypass switch Line and high level inputs Full Remote control Full front display	0-180° phase switch Filter bypass switch Line and high level inputs Full Remote control Full front display	0-180° phase switch Filter bypass switch Line and high level inputs Full Remote control Full front display
Finish options	Vinyl wraps : rosewood, beech, cherry, black, silver	Vinyl wraps : rosewood, beech, cherry, black, silver	Veneer finishes : rosewood, beech, 'Bird's Eye' maple, cherry, black ash, light maple Piano finishes : black, rose- wood, light maple, cherry	Veneer finishes : rosewood, beech, 'Bird's Eye' maple, cherry, black ash, light maple Piano finishes : black, rose- wood, light maple, cherry



The SW-150 uses manual controls and features a downward firing port to maximise efficiency.

All other models in the range feature a front panel graphic display and full function remote control



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CODE: WH.SW2.11.2004