

# WHAT HI\*FI?

## ACES HIGH? *Sonos aims to trump rivals*

**REVIEWED**

*The multi-room specialist takes on Apple, Sony and Bose with its premium noise-cancellers*



Samsung's sharp, vivid flagship 65in QLED



Roberts' portable radio is a dinky delight



Large wireless hi-fi speakers for inside



**PLUS**  
Serious soundbar packages with surround speakers, from JBL, Yamaha and Samsung £1000+

**On the button**  
Physical controls are a plus in our book



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Our pick from £1000-£2000



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*What Hi-Fi?*  
p22



## CARDS ON THE TABLE...

Entering a new market is never easy. Entering a market where a number of your rivals are already doing an absolutely stellar job must be a truly daunting proposition - especially when some of those rivals are called Sony, Bose, Apple, Sennheiser and Bowers & Wilkins. Fair play, then, to multi-room speaker and soundbar specialist Sonos for taking the headphone bull by the horns. It has named its premium noise-cancellers Ace; so has it played its trump card? Our **Sonos Ace First Test (p6)** will reveal all.

Also in this issue we have a round-up of our favourite **floorstanding speakers (p28)** costing £1000-£2000. They are joined by some **wireless speakers for the home (p50)** which will provide excellent sound with minimal fuss and footprint.

To round things off, many of *What Hi-Fi?*'s review team spent a number of days visting **High End Munich (p38)** Europe's premier hi-fi expo. We bring you extended highlights of the show, and are really excited about what the future is bringing to the wonderful home entertainment and hi-fi industry.

Jonathan Evans, editor

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## MY PRODUCT OF THE MONTH

### Samsung Q990D, p64

A very impressive soundbar with surround speaker package that makes home cinema simple



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## HOW WE TEST



### EXPERIENCE. HERITAGE.

We have been helping the world discover the best in hi-fi and home entertainment for more than 45 years, and have more than 100 years of reviewing experience under our collective belts – so you can count on our expert opinion.



### DEDICATED TEST FACILITIES

We test every product against its peers in our extensive, bespoke reviewing facilities in London and Reading. We conduct all our tests as a team – our opinions and conclusions are always the result of collaboration.

## HOW WE SCORE

All review verdicts are agreed upon by the team as a whole – not an individual reviewer. Each product will be listened to and/or viewed by several members of the test team, who will then discuss the final verdict before it appears in the magazine or on the website. This avoids any individual bias creeping in.

### OUR SCORES EXPLAINED

One of the best ★★★★★  
A serious contender ★★★★★☆  
Worth a look ★★★★★☆  
Disappointing ★★★★★☆  
Awful ★★★★★☆

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# FIRST TESTS

EXCLUSIVE, IN-DEPTH  
VERDICTS ON THE  
LATEST KIT

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Wireless headphones | **£449** | [whf.cm/SonosAce](https://whf.cm/SonosAce)

## Sonos Ace

Sonos goes big and drops its first ever wireless headphones

**Rumours and rumblings** of wireless headphones to complement the rest of the Sonos family have been doing the rounds for a while now, and when you think about it, it's not a huge leap. Sonos has already nailed the soundbar, wireless speaker and multi-room markets. If it can introduce a couple of unique selling points while mastering sound quality, such cans could be quite the success story.

But Sonos is entering a market that isn't for the faint-hearted. Some of the brands in the space are huge hitters and were making headphones before Sonos was even born. The likes of Apple, Bose, Bowers & Wilkins, Sennheiser and Sony all have sensational Bluetooth, over-ear noise-cancelling headphones that we rate at five stars.

We expected Sonos to be gunning for the expensive Apple AirPods Max (£549), but the Ace's £449 is smack bang in the middle of Sony and Bose territory too.

Sonos has a reputation for designing minimalist products that blend into the home anonymously without drawing attention to themselves, but we think the Ace are nicely made with a hint of style.

At 312g they are lighter than the AirPods Max (384.8g) but a touch heavier than the Sony WH-1000XM5 (250g), and you can feel the difference in hand. The earcups feel smooth to the touch and are coated in an anti-fingerprint finish that we couldn't tarnish when handling. The Sonos logo on one earcup is meant to be subtle and shimmers only when it catches the light, but it is rather large when it does.

The earpads use memory foam coated in a layer of vegan leather (polyurethane)

### KEY FEATURES



30hr battery life



TV Swap feature



Noise-cancelling

that feels quite plush, although you get a bit more cushioning from the Sony and Apple. The adjustable headband uses a firmer structure of the same materials, and we find them comfortable enough.

We particularly like how the hinges and joints are concealed in the body of the headphones; it offers a more elevated look and ensures those with long hair won't get it caught while moving them into position. The earcups swivel flat but don't fold up, while the replaceable earpads are attached to the frame by strong magnets.

For the Ace, Sonos has resisted the temptation to add touch controls, and in our opinion, they are all the better for it. On the left earcup is a button for power and Bluetooth pairing, and the right earcup has a single button to cycle through the

noise cancelling modes. It also has a multi-functional slider/button (the "content key") which you can slide up and down to change the volume and press a couple of different ways to control playback. It's quick to respond to pressing and sliding, even if it feels a tad plasticky.

### Good battery life

The Sonos Ace are equipped with Bluetooth 5.4 and can play lossless audio from compatible sources thanks to aptX Lossless support.

You get 30 hours of playtime with Bluetooth and ANC turned on. The Sony XM5 are also good for 30 hours, but the AirPods Max lag behind with just 20 hours while the Bose QuietComfort Ultra Headphones offer 24 hours. Fast charge on



As is the trend, the Sonos Ace swivel flat but don't fully fold up

**“The Ace are not wi-fi headphones – they connect via Bluetooth only. That means you can’t connect them to the wider Sonos ecosystem or to an Era 100 speaker as many have long hoped”**

the Sonos gives you three hours of juice from just a three-minute charge.

Wear detection (which automatically pauses music when you remove the headphones and resumes playing when you put them on) and Bluetooth Multipoint are also available, the latter so you can connect to two sources simultaneously.

The headphones also support spatial audio with dynamic head tracking across music and movies with apps that support Dolby Atmos. Dolby Atmos and 360 Reality Audio tracks in Apple Music, Amazon Music, Tidal and Deezer are all supported.

In the Sonos app you can turn spatial audio on and off, and there are settings for Bass, Treble, Balance and a Loudness setting designed to boost bass and treble at low volumes. Unlike some rivals such as the Bose, there's no way to alter the intensity of the noise cancelling; it's either on or off, or you can engage Aware mode if you want to hear your surroundings.

Some Sonos fans might be disappointed to learn that the Ace are not wi-fi headphones - they connect via Bluetooth only. That means you can't connect them to the wider Sonos ecosystem or to your Era 100 speaker as many have long hoped.

**The Ace's TV Swap feature allows you to integrate with a Sonos soundbar**

There actually is a wi-fi chip in the Ace, but it is used only for the TV Audio Swap and TrueCinema features.

These functions help to integrate the Ace headphones into your Sonos-based home cinema system, in a move typical of the brand, which is always keen to complement its products with handy pairing or multi-room/function abilities.

The TV Swap feature is available at launch but works only with the Sonos Arc and iOS devices. It will be compatible with other current Sonos soundbars such as the

Beam and Ray later on. The feature lets you beam the sound from your soundbar to the headphones, so you can listen to TV and movies privately at night without disturbing the rest of your household.

During testing we have the Arc running with a Samsung S95D TV and Panasonic DP-UB820EB 4K Blu Ray player. Swapping from the soundbar to the Sonos Ace using the content key is generally instant and seamless. However, our experience isn't completely smooth sailing.

There are a couple of occasions when switching to the headphones that the sound distorts and crackles, as if the two devices haven't quite locked on to one another. On one occasion, we wait around



**"It's quite a simplistic and safe sound – not one we would call exciting or enthralling. It is also very congested, and there is a real lack of spaciousness"**

seven or eight seconds for the signal to become stable.

We also experience a couple of lip-syncing issues, sometimes quite obvious while at other times only a fraction out, but enough to register with your brain. Disconnecting the headphones completely and reconnecting seems to clear things up, but it's not ideal. Hopefully, this is just a teething issue that can be ironed out via a firmware update.

The other new home cinema feature is the TrueCinema calibration, which uses new software to tailor your headphones' acoustics to your room, bringing a more spatial and immersive experience when watching Dolby Atmos soundtracks via a Sonos soundbar.

**The Ace boast a 30-hour battery life with Bluetooth and ANC switched on**

The idea is to not feel like you are wearing closed-back cans, but rather have the sound tailored in the way your Arc is calibrated to your room's acoustics. TrueCinema isn't available at launch but should arrive later this year.

Sonos has confirmed that the Ace's 30-hour battery will drain faster when connected to the Arc, but assures us it should last two nights of movie-watching. Switching back to using the headphones with your smartphone or portable device will revert back to the standard Bluetooth connection.

Eight mics - four in each cup - are used for active noise cancelling and to deliver clear voice quality for calls. During testing, in a range of environments from the train to the London Underground to a busy pub environment, we found noise cancelling to be okay, but not up to the standards set by the Sony and Bose rivals.

The Ace throw a blanket over loud background noise, but frequencies still creep in that are kept out by the very best. Rival pairs boast a quieter and cleaner-sounding background. With the Ace, it feels as though more details are bleeding in.

We also find the Ace struggle to impress when it comes to call quality. On a relatively blustery day, our voice sounds quite muffled, and there's quite a lot of variation in background noise depending on whether we are static or walking around. The Sony XM5, by contrast, have much more of a handle on interference from the outside world.

Our voice sounds more consistent when moving around and they do a better job of suppressing general noise

### **Decent solidity**

We start proceedings with the playful, poppy tones of Taylor Swift and *Shake It Off*. In isolation, the Ace produce a perfectly listenable and inoffensive sound.

The drum kick lays down the track's beat with decent weight and solidity. It doesn't overpower her vocal or stick out from the rest of the track. You can still hear other elements such as the trumpet and the claps which sound rich and devoid of any hard edges. But it's quite a simplistic and safe sound - not what we would call exciting or enthralling. It's also very congested and there's a real lack of spaciousness. Rivals draw a clearer



distinction between the saxophone line, the claps, the drums and Swift's vocal. Through the Sonos Ace, everything sounds a little blurry and confused. The Sonos look at the track through a much clearer lens. Where the track stops and starts, the Sonos make a definitive pause and the song has more of a distinct flow. They track rhythms much more closely and accurately. Dynamically they are more communicative and immediately you are foot-tapping, where the Sonos have real trouble keeping up and struggle with the natural flow of the song.

With detail levels, once again key rivals take things up a notch. The Bose sound bolder and more powerful, especially in the bass. The Apple and Sony once again just give you more across the board. Vocals gain a newfound sense of expression in terms of detail and dynamics. Both of these pairs do a much better job of drawing you in and holding your attention. In comparison, it feels like the Ace lose quite a lot in translation. Turning ANC off reduces the compressed, congested delivery somewhat and shows just how much heavy processing the Ace are actually doing.

We switch to *Time* from the *Inception* soundtrack. It's a great slow-burner with a beautiful build-up thanks to the drawn-out, elegant strings, subtle heartbeat-like bass and delicate piano play. It's an emotive piece of music, but listening through the Sonos Ace, our emotions aren't stirred. The crescendo is handled well, though, and it doesn't feel as if the bass is lacking as the

**AptX Lossless support means the Ace can play lossless audio**

headphones deliver those swells of low frequencies in the track.

But through rival pairs, you really get to savour the slow build and those low-level dynamics just as much as the big ending. The Sonos skip over the finer details and, as we said, simply don't stir the emotions like the very best pairs do.

We finish our testing listening to *Top Gun: Maverick* through the Sonos Arc via the TV Swap feature. Without spatial audio, the movie soundtrack sounds weighty and solid through the Ace headphones, and in keeping with the general character of the headphones. Dialogue is easy enough to follow, and as the fighter jets joust and duel over the desert, the sense of power on display as they fire up the afterburners is reasonably well conveyed.

Switch spatial audio on and you do feel the



**Earpads use memory foam coated in vegan leather**

**"As the fighter jets joust and duel over the desert, the sense of power as they fire up the afterburners is reasonably well conveyed"**

## WHAT HI-FI?

**RATING** ★★★★★

### SOUND

★★★★★

### FEATURES

★★★★★

### COMFORT

★★★★★

### FOR

- Streamlined, stylish design
- Inoffensive, balanced sound
- Reasonable levels of detail

### AGAINST

- Lack of clarity and expression
- Stunted dynamics and rhythmic drive
- Average ANC and call quality

### VERDICT

The competition at this level is head and shoulders above the Ace when it comes to sound quality

[View offers](#)Projector | £2099 | [whf.cm/BenQ\\_X3100i](http://whf.cm/BenQ_X3100i)

# BenQ X3100i

BenQ's latest gaming projector is surprisingly good with movies too

Despite costing pretty serious money for what is ostensibly a fairly casual projector, the BenQ X3100i looks at first glance to be all about having fun. Its cubic design is cuter and cooler than that of most home-entertainment projectors, and BenQ is keen to stress that this is a projector designed very much with gaming in mind.

The more time we spend with the X3100i, however, the more convinced we are that its hip looks and strong gaming chops are actually just the start of its charms.

By gaming projector standards, the X3100i's £2099 asking price represents quite a chunk of change. It is, though, BenQ's current flagship gaming projector, and goes the extra mile to try to justify its price by including an unusually potent built-in speaker design (that partly explains the quirky cubic shape), and an integrated Android TV smart system.

## Something different

Like all of BenQ's X series of gaming projectors, the X3100i enjoys a more striking, cutesy design than typical home entertainment projectors are treated to.

It stands much taller for starters - in fact, it is almost as tall as it is wide. Its top and sides are finished in a crisp,

### KEY FEATURES



DLP projection technology



4LED lighting system

120Hz

120Hz gaming compatibility

The BenQ's square shape is practical as well as strikingly idiosyncratic

living room-friendly white, while its front edge enjoys a starkly contrasting glassy black finish with an orange trim.

The X3100i ships with a projector-focused remote of its own and a smart remote associated with the Android TV dongle. The latter handset includes a handy selection of four direct video-streaming app buttons for Netflix, Prime Video, YouTube and Disney+.

The BenQ X3100i is a DLP projector illuminated by a 4LED lighting system. This adds a so-called extra 'pump' LED to the usual red, green and blue LEDs that extends the projector's life span to a claimed 30,000 hours before lamps should need changing. The X3100i claims to be a 4K projector, too, courtesy of DLP's XPR technology, where the switchable mirrors on the DLP chipset are 'flashed' multiple times per image frame to create a (Consumer Technology Association-approved) 4K effect.

High dynamic range playback is supported in the HDR10 and HLG formats, and BenQ claims a very high contrast ratio of 600,000:1.

The gaming credentials the X3100i builds so much of its identity on are genuinely extensive. Its input lag, for starters, drops to just over 4ms with 120Hz feeds - a remarkably low figure for anything outside the dedicated gaming monitor world.

The X3100i's HDMI 2.0b connections support 4K at 60Hz and 1080p at 120Hz - though Xbox Series X owners should note that, oddly, while 4K@60Hz works in tandem with HDR, the HDR isn't sustained if you switch to 1080p@120Hz. The X3100i also supports ALLM switching and eARC so that you can pass 7.1 and lossless Dolby Atmos soundtracks through the projector to a connected soundbar or AV receiver.

The audio system built into the X3100i is a stereo 5W affair powered by CinematicSound technology. Here, a 'Bongiovi DPS' audio processor tries to create a three-dimensional surround sound effect with accurately placed effects from the two-speaker set up.

Last (and kind of least) on the X3100i's feature list are its smart features. They are built on the Android TV platform, which, as usual with projectors, proves a bit of a mess. We have experienced numerous bugs and crashes, and the app support is hit and miss. So while Netflix, YouTube, Google Play Movies and TV, Prime Video and Disney+ are all present and correct, there is currently no sign of the BBC iPlayer, All 4 or My5.

## Master of both trades

Once we have navigated the simple set-up process, we kick our tests of the X3100i's picture quality off - meanies that we are - not with the game sources it was made for, but with a selection of our favourite 4K Blu-ray test movies. Happily, though, this doesn't faze the X3100i at all. In fact, it does a better job with all of our movie choices than many more film- or home entertainment-focused models we have tested recently.

Particularly great to see, after seeing so many recent failures in this department, is how well the X3100i handles the extremes of brightness and darkness associated with HDR content. Despite the fact that HDR was developed for screens rather than projectors, the X3100i's 3300 lumens of peak brightness deliver bright HDR scenes with more than enough intensity to sell the HDR experience. At the same time though, its various image analysis and brightness control features produce much more convincing and consistent black levels than so many of its peers. The result is a picture that remains consistently natural-looking during both bright and dark scenes.

The X3100i's colour performance is a cut above most of the competition, too. Exceptionally vibrant animated content such as *Puss In Boots: The Last Wish* on 4K Blu-ray erupts off the screen with some of the most dazzlingly rich saturations we have seen around this price point. At the same time, though, there is seldom if ever anything uncontrolled or unbalanced about even the X3100i's boldest tones.





Maybe even more impressive, though, is how natural the X3100i's colours look with relatively subtle imagery, such as skin tones and dark clothing colours in low-lit scenes. The results are, again, consistently authentic.

Given that performance level with films, it is no surprise that the X3100i excels, with knobs on, when fed the likes of *Call Of Duty*, *FIFA*, and *Diablo IV* from your gaming device of choice. The brightness, sharpness, colour saturation and contrast intersect immaculately with every game genre and location.

The X3100i delivers one of the most responsive gaming experiences we have had outside a dedicated gaming monitor, too - especially at 120Hz.

Negatives? While black levels are generally good with HDR content, things can turn a bit grey under extreme circumstances - such as when a very dark shot is punctured by a particularly bright object - and we are also occasionally aware of a little of DLP's rainbow effect, where stand-out bright objects can cause you to see stripes of red, green and blue flitting in your peripheral vision.

HDR is supported in HDR10 and HLG, and the contrast ratio is 600,000:1

**"Vibrant animated content on 4K Blu-ray erupts off the screen with some of the most dazzlingly rich saturations we have seen at this price point"**

The X3100i sounds much better than most projectors. In the Cinema mode, for instance, aspects of a surround sound game or movie mix are cast a surprising distance from the projector's bodywork. The dynamic range is impressive, too, with crisp but never shrill treble at one end of the spectrum, and deeper bass than most projectors manage at the other. Midrange is nice and clear too.

While BenQ's X3100i lives up to its flagship gaming-projector billing by delivering a fantastically responsive, immersive, vibrant and sharp experience, it also works surprisingly brilliantly with movies. Add in a more than serviceable built-in sound performance, and the X3100i's initially intimidating price actually starts to look like a bargain.

WHAT HI-FI?		RATING ★★★★★	
<b>PICTURE</b> ★★★★★	<b>FOR</b>	<b>AGAINST</b>	<b>VERDICT</b>
<b>SOUND</b> ★★★★★	<ul style="list-style-type: none"> <li>• Excellent all-round picture quality</li> <li>• Good gaming features and performance</li> <li>• Long LED lamp life</li> </ul>	<ul style="list-style-type: none"> <li>• Limited Android TV smart system</li> <li>• No 4K/120Hz/Dolby Vision support</li> <li>• Slight rainbow effect</li> </ul>	Don't be fooled by the 'gaming projector' tag - the BenQ X3100i is a very accomplished all-rounder
<b>FEATURES</b> ★★★★★			

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In-ear headphones | £299 | [whf.cm/ZE8000\\_Mk2](https://whf.cm/ZE8000_Mk2)

# Final ZE8000 MK2

Your Final destination for great sound – or a sonic dead end?

**Like an up-and-coming** UFC fighter hyping himself up before stepping into the Octagon to do battle with the heaviest hitter in the business, the Final ZE8000 MK2 talk a big game, claiming the “fullest possible portrayal of sound texture and detail”. So, we are keen to discover whether they are champions elect or ham-fisted no-hopers.

With a premium price of £299, these buds are a smidge more expensive than the Award-winning Sony WF-1000XM5 (£259), and a substantial step up from Apple’s five-star AirPods Pro 2 (£229). They are more akin to the excellent Bose QuietComfort Ultra Earbuds (£300).

These long-stemmed earbuds are cheap-feeling and oddly shaped, with a rectangular design that puts us in mind of a small telegraph pole or Tetris block. That might well be your cup of tea, but the accompanying charging case leaves us feeling underwhelmed thanks to its oversized dimensions and plasticky feel.

The ZE8000 MK2’s thin, long-stem form does seem to keep the buds as light as possible and, in fairness to Final, they are comfortable and don’t feel cumbersome in the ear. The five

## KEY FEATURES



IPX4 waterproof rating



Up to 15 hours total battery life (5 hours buds, 15 hours including case)



AptX HD and aptX Adaptive support

provided tip sizes certainly help in finding a better fit, although these buds are not designed for sport and strenuous exercise can cause their seal to come loose.

It is only fair to start with the MK2’s big selling point: “8K Sound”. While that term might raise a few eyebrows from technical editors and sound engineers everywhere, it is best to treat it simply as Final’s label for its proprietary sound processor, a nifty feature akin to Sony DSEE tech which enhances the quality of audio by some clever digital-signal processing. More on 8K later.

The ZE8000 MK2’s noise cancelling, which offers four main modes, works well without ever blowing us away. To cycle through those modes you will need access to Final’s proprietary app, a well organised and easily navigable platform from which, among other things, you can also tweak your EQ settings.

Battery-wise, the ZE8000 MK2 are adequate but far from outstanding (a maximum of five hours from the buds alone and 15 with the charging case), although an IPX4 rating means they will happily survive a light rain shower.

## A clear knack

A breezy, funky remix of The Wombats’ *Greek Tragedy* would normally have us running for the proverbial hills, but it is great for assessing facets such as timing, detail and vocal delivery, all of which the



Final ZE8000 MK2 adeptly showcase their knack for, thanks to their crisp, open character.

The buds dig out the music’s sparky, peppy underpinning, and drive things forward with rhythmic precision. And switching on 8K, while a drain on our precious battery, did give the buds a crisper, cleaner and more detailed sound on our favourite hi-res test tracks. Music with a leaner character and an aggressive leading edge, though, can often end up feeling overly harsh on the ears.

Brisk, clean, detailed sound is one thing, but we are also looking for musicality and dynamic aptitude. Camila Cabello’s *Havana* is a nice tester of the latter, and the Finals are not so hot when it comes to really feeling the richness and musicality of the track’s woody, expressive piano hook. The Sony XM5s do a better job in those respects.

Essentially, despite their enthusiasm, the ZE8000 MK2 keep the music slightly at arm’s length to the detriment of soul and expression. Not the final word in great wireless sound, then, but there is plenty to like about the MK2’s attention to detail and crisp, snappy nature, and this is an admirable effort in many ways.



A cheap-feeling charging case does not do the Final any favours

## WHAT HI-FI?

RATING ★★★★★☆

### SOUND

★★★★★

### FEATURES

★★★★★

### COMFORT

★★★★★

### FOR

- Bright, lively sound
- They dig out plenty of detail
- Strong support for hi-res codecs

### AGAINST

- Short on musicality and dynamics
- Treble can be hard-edged
- Buds and charging case feel cheap

### VERDICT

Plenty of detail and enthusiasm, but their limitations with insight mean that they are not quite top-drawer



## WHY CHOOSE FITUEYES TV STAND

From televisions to works of art, the Fitueyes TV stand; ingeniously transforms with its exquisite design inspired by nature and ancient monuments. It incorporates elements such as natural wood, stone textures, and grilles into its meticulous design. The internal cable management system conceals wires, ensuring an unobstructed viewing experience.

Ergonomically designed for healthy viewing, the stand has undergone three tilt tests to ensure stability. Made from robust materials and capable of supporting up to 85kg. The Fitueyes stand, securely holds televisions up to 100 inches, enhancing your viewing experience to a new level.

View offers

Portable surround-sound system | £499 | whf.cm/SonyHT\_AX7

# Sony HT-AX7

Bird? Plane? No! It's Sony's... portable theatre/360-degree music thingy

Over our decades of venturing into the more esoteric parts of the hi-fi world, we have come across all sorts of weird and wonderful (and not so wonderful) products. Few if any, though, have caused quite as much head-scratching at *What Hi-Fi?* towers as the Sony HT-AX7.

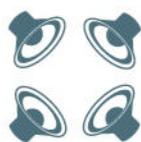
The HT-AX7 is small enough to be a portable music speaker, but two discs attached to its top edge suggest something else is going on.

It turns out that those discs can be detached to become separate wireless speakers - so maybe the AX7 is an unusually small soundbar? Except that it doesn't have any physical source connections or even wi-fi connectivity. Maybe it is an immersive surround sound music player? But Sony itself calls it a portable theatre system. Confused? You should be...

The Sony HT-AX7's identity crisis plays out in its price. If you think of it as a personal/portable music speaker, its £499 tag makes it a pretty premium affair. Yet if it turns out the AX7 is effectively a dinky soundbar, that price would make it seem reasonably affordable by regular soundbar standards.

The Sony HT-AX7 is certainly a unique looker. In its 'joined up' state it comprises an eclair-shaped, fabric-covered base unit around 30cm long, 10cm high and 12cm deep, with two 3.9 x 12 x 12cm (hwd) circular speakers sitting tidily on top of each end of the base unit.

## KEY FEATURES



Surround sound



Bluetooth



30-hour battery life

Ideally, each speaker should be about 1m from your seating position

The top of the base unit houses a selection of control buttons but, unexpectedly, the HT-AX7 doesn't ship with a remote control. The only physical connection across the whole system is a USB-C recharging port on the base unit. Build quality is excellent.

After lots of experimentation with speaker placement, lots of playing around with its sound modes and lots of experimentation with different types of source, our conclusion is that Sony's own description of this as a Portable Theatre System probably gets closest to the mark.

Sony's guide for the AX7 essentially describes two different set-up scenarios. One 'room-filling mode' where the two detachable disc speakers can be placed pretty much anywhere, regardless of where the main speaker is, and one where you place the three speakers in a more or less triangular configuration, with each one around a metre or so away from your seating position.

The room-filling mode kicks in if you turn off the AX7's Sound Field effect audio mode, and essentially sees all three speakers outputting the same sound, so that music is simply spread more evenly around your room/house for a party-type vibe. Much more intriguing and effective, though, is the surround sound 'triangle' effect you get with the Sound Field mode on.

## Spatial awareness

This brings Sony's 360 Spatial Sound Mapping system into play, where the Sony analyses the acoustic properties of your room and the three components relative to one another and creates 'virtual' speaker points that make you feel as though you are wrapped in a bubble of sound.

While the AX7 doesn't support Dolby Atmos or DTS:X decoding, its audio processing does seem to respond differently for movie and music use.

You can elect not to detach the circular speakers if you want a more standard portable music speaker playback experience, but that would rather defeat

the object of the flexible, three-speaker design that you are paying for.

Sony claims up to 30 hours of continual use (depending on volume) from the three speakers on a full charge. For yes, the main unit is battery powered too. Sony claims you can get enough charge into the system from a mere 10 minutes of mains connection to deliver 150 minutes of use.

## Bluetooth only

It's not just the physical connections that are limited; the only way of getting sound into the AX7 is Bluetooth (version 5.2), using the AAC and SBC formats. This - together with the 'portable theatre' tag - points to Sony envisaging its speaker system being most often used with other portable devices, such as laptops, tablets and smartphones.

The main 'front' speaker in the AX7 package features two front-firing Sony X-Balanced speakers, while two passive radiators are tucked behind the main speaker's curved ends. Power comes via Sony S-Master amps.

As there is no remote, the only ways to control the AX7 are via the buttons on the top of the main unit and Sony's Home Entertainment Connect app, which, while rather basic, does get the job done.

How good the HT-AX7 sounds depends on a number of factors and, in the end, these join the minimal connectivity to really limit the speaker's usefulness.

For starters, the effectiveness of the 360 Spatial Sound effect depends on where the three speakers are placed - ideally not much more than 1-1.2 metres or so away from your seating position. In a home-cinema role, though, the Sony will still be set behind your likely visual source (such as a tablet or phone), and if you try and spread the 'triangle' of speakers out too far, palpable gaps and disparities open up in the surround-sound hemisphere.

This means that you can't really use the AX7 as a regular surround-sound soundbar, with the main speaker under your TV and the two circular speakers





sitting behind you. This is especially ironic because the HT-AX7 is at its best in sound-quality terms as a surround-sound movie system. The general sense of surround staging with Dolby Atmos, DTS:X and lower-quality surround formats is pretty effective with the speakers arranged in the compact array we have described, generating a surprisingly well-connected and immersive dome of sound.

The power and impact from the AX7's three speaker components exceed expectations raised by the system's size, too, with even the heavy percussive beat at the start of chapter two of *Blade Runner 2049* on 4K Blu-ray sounding potent and convincing to a degree that leaves any built-in TV sound system for dead. The effectiveness of this *Blade Runner* effort owes some debt, too, to the AX7's surprisingly impressive bass performance. It reaches lower frequencies than you might imagine possible from its compact size.

Vocals sound credible and clear too, and there is lots of clean, well-balanced

**"Sony's guide for the AX7 describes two different set-up scenarios. One 'room-filling mode' and one where you place the three speakers in a triangle"**

detail in the AX7's presentation of movie mixes. If you push the volume really high during dense soundtrack moments, however, the rear speakers can start to sound congested.

Using the HT-AX7 in surround mode with music is more of a mixed bag. In general, the Sound Field mode does a good job of 'remixing' stereo music into Sony's 360 Spatial Sound environment, showing an understanding of what really needs to remain locked to the front speaker, but dense, layered music such as heavier rock and some orchestral tracks can start to sound dirgy and forced with the Sound Field mode active. The rears are more likely to distort with dense music than with movie mixes, too.

Popping the circular speakers back onto the main unit so that the system

becomes a more conventional portable wireless speaker achieves solid results. There is that familiar detailed, dynamic and open quality to the sound we have come to expect from Sony S-Master amps and X-Balanced speakers, and the sound spreads a nice distance beyond the speaker's physical confines without losing cohesion. But none of that is enough to make it a serious competitor among £500 portable speakers.

There are strong elements to the HT-AX7's sound and design, as we would expect from Sony, but its unique approach to personal and portable sound comes with strings attached. In the end, while we laud Sony for trying to do something new, the HT-AX7 ultimately feels like an attempt to solve a problem that doesn't really exist.

**The AX7 is nothing if not innovative, but its very nature means compromise**



## WHAT HI-FI?

**RATING** ★★★★★

### SOUND

★★★★★

### FEATURES

★★★★★

### BUILD

★★★★★

### FOR

- Attractive and ingenious design
- Creates convincing 360-degree effect
- Crisp, detailed sound

### AGAINST

- No HDMI or wi-fi connectivity
- Small speakers can distort
- Limited dynamic range

### VERDICT

While unique and interesting, the AX7 doesn't entirely satisfy as a home cinema device or Bluetooth speaker

View offers

Wireless headphones | £300 | whf.cm/FidelioL4

# Philips Fidelio L4

Philips adds another good pair of headphones to its Fidelio line

**Standing out in** the busy noise-cancelling headphones market is no mean feat, particularly when it is dominated by a couple of big brands and a number of go-to recommendations.

That hasn't fazed Philips. The brand's Fidelio range has been releasing good headphones for years, quietly confident that people are looking for alternatives away from the path most travelled - and the Philips Fidelio L4 are its latest over-ears to do just that.

The Fidelio L4's launch price of £299 puts them squarely up against the Sony WH-1000XM5, which launched at £380 but are now widely available for £299 in the UK.

The Fidelio L4's all-black design isn't eye-catching, but they do set themselves apart from a lot of their competitors by opting for a circular earcup, instead of oval. The earcups themselves sit within circular brushed aluminium yokes and are hinged to give the earcup freedom of movement up and down for comfort. They also swivel flat to make them easier to travel with.

Vegan leather covers the earpads, which feel suitably squishy to the touch, while the slimmer, redesigned headband gets sturdy Muirhead leather. The curved metal arms that attach to the earcups extend out smoothly from underneath the covered headband to give you a larger fit if you need it, though even at their smallest, the fit is on the loose side - and this is only added to by a reduced clamping force when compared with their predecessors, the L3.

While this makes for a comfortable fit for long listening periods, they don't always feel the most stable when you are moving around. The cans won't make a leap for freedom if you make a sudden dive forwards to pick

## KEY FEATURES



Up to 50-hours' battery life



USB-C audio



Noise cancellation

The L4s' headband is made from premium-feeling Muirhead leather

something up from the floor, but they will shift. As a result, and since they also don't have an official IP rating, these may not be the best for running and exercising.

Under each earcup, you'll find a couple of buttons - the power/pair button on the left, and on the right, a button to summon your phone's voice assistant and one for noise cancellation controls. The right earcup also holds touch controls for playback, with taps for pausing and playing, and swipes for track selection and volume. They are suitably responsive, without being overly sensitive, cleverly using a double tap for play and pause to avoid unwanted taps when adjusting the cans.

There's the choice of wireless or wired listening, through either a 2.5mm-to-3.5mm cable or USB-C, with one input on the underside of each earcup, with the USB-C port also being used for charging.

While everything feels solid enough, the earpads are just a tad on the warm side when worn at length, and the leather on the headband ripples when stretched, in a way that could damage or wear over time.

As with a lot of headphones, you need to download the dedicated partnering app to access a lot of the Fidelio L4's additional features - things such as the auto-off function, the wear sensor, audio latency adjustments and the ability to hear your own voice when on calls. These can all be switched on or off within the app.

There are also more granular custom controls for noise cancellation and transparency modes, an EQ with four presets and the ability to set your own, and spatial audio controls too - this will add a "spatial" effect to all music,

not just Atmos audio tracks. It isn't an effect we love - it makes music sound a little hollow and echoey, so we chose to keep it off for the most part. Specific Atmos tracks do fare a bit better with it though, so it's worth a try if you like spatial audio.

The Fidelio L4 use Bluetooth 5.3 with support for

AAC, LDAC and LC3 codecs, with aptX noticeably missing this year - despite being included on the L3. Higher-resolution music playback is possible by using one of the wired options though, with both cables included in the box.

Google Fast Pair is also supported for easily connecting an Android phone (though we also had no problems pairing with an iPhone 15 Pro Max), and Bluetooth Multipoint lets you swap easily between two connected devices without the faff.

The Fidelio L4 are noise-cancelling headphones, and do a pretty good job of blocking out the world around you. Like many, they cope best with cancelling out steady, low-end noise - meaning public transport rumbles are all but gone, particularly when you start playing music. Office and coffee-shop chatter is significantly dulled too, it's only the sudden beeps of a train door or the passing of a loud motorbike that might interrupt you. Bose remain the champions in this area, but we wouldn't say the L4 are too far off Sony's level here.

However, the Sony WH-1000XM5 do offer a quieter noise floor when noise cancellation is up at its max - something that's really noticeable only when no music is playing, though - and they also handle wind tear better too. Philips has done some work here to improve the L4's wind performance, adding a new voice mic and relocating the venting port to the rear of the earcup, but we do find it can still be caught out on occasion.

Where the Fidelio L4 can pip the Sonys on features, though, is battery life. They have even better battery life this time around, now up to 40 hours from 32 when using ANC - 10 hours more than the WH-1000XM5 - and up to 50 hours without it. There's also a fantastic fast-charging option, offering 14 hours of playback from a 15-minute charge, with a full charge taking around two hours.

It is worth noting that, in early testing, we had a few disconnection issues, which Philips told us was down to an over-sensitive wear sensor - something that would be rectified by a firmware update.





**"Press play on the Fidelio L4 and you are immediately greeted with a rich, warm and confident sound that is easy to listen to"**

As our testing has continued, we have seen these issues clear up, although we are not currently aware of any firmware update having been issued. It is just something to be mindful of if you choose to buy these headphones.

### Confident sound

Press play on the Fidelio L4 and you are immediately greeted with a rich, warm and confident sound that is easy to listen to. It's far from an analytical listen - the bass is undeniably boosted here - but very few people are looking for that from headphones like these. Rather they are fun, full-bodied and engaging. The warm personality lends itself particularly well to hip-hop, EDM and pop music, fully embracing the bassy beat in Cordae's *Two Tens* and the pulsing bassline in Doja Cat's *Agora Hills*. As big and authoritative as those lower registers are, they are well

You can use the L4 wirelessly or via a 2.5mm-to-3.5mm cable or USB-C

controlled, without adding unwanted thickness to the midrange. The midrange itself is clear and agile, with a decent level of detail and insight. Instruments have a fair amount separation for this level too, so nothing ever feels congested, even at high volume.

The treble is largely well behaved too, and never sounds harsh or shouty. It's very carefully rolled off to prevent this, but the

L4 keep enough snap and sparkle here for when it's needed. It's only when compared with the Sony WH-1000XM5 that you realise there's a level of insight and refinement that's missing here. Finer details are all the more noticeable on the XM5s and everything just flows better, with a tighter sense of togetherness.

The bass is just as rich and authoritative, but it's less in your face, for a better overall balance, and the WH-1000XM5 time better too. It's a more upfront and exciting sound because of that, driven along with more agility than the Philips can muster, and more explicit in their handling of dynamics to boot.

Listen over USB-C and the Philips pull a little bit of this back, tightening up their timing, uncovering a smidge more detail and helping to improve dynamics too. But even so, the Sony WH-1000XM5 remain the better-sounding performer overall.

Despite this, there's something very likeable about the Philips Fidelio L4, and we think that a lot of people who pick them up will think the same. For anyone who likes their bass with a bit more oomph than your seasoned audiophile might find acceptable, the Fidelio L4 can offer that without being overbearing.

Critical ears will pick up some niggles with rhythmic drive, and there is more insight and dynamic prowess to be had from their very talented competition at the same price. Still, they are comfortable for longer listens, can cut out noise as well as some of the best and have a superb battery life that seems to go on and on. They may not be the best at this price, but there's still plenty to like here.

## WHAT HI-FI?

RATING ★★★★★

### SOUND



### FEATURES



### COMFORT



### FOR

- Fun, engaging sound
- Long battery life
- Good noise cancellation

### AGAINST

- Boosted bass won't be for everyone
- Strong competition

### VERDICT

Good ANC headphones with lots to like, but some very capable competition looms large

View offers

Radio | £100 | whf.cm/RevivalPetite2

# Roberts Revival Petite 2

Tiny footprint, fabulous design, serious sound



Sometimes, a product will come through the *What Hi-Fi?* test rooms that makes everyone in the team go: "Yes." The Roberts Revival Petite 2 radio is one such product. It is a dinky DAB radio with Bluetooth powers; but really, just look at it. It's tiny, it's cute, and we want it.

Even as wireless speakers and music systems are getting smarter and more multi-functional every day due to increasing demand, there is something universally appealing about the humble radio, especially one with such a compact form and such lovely retro looks.

## Design pedigree

Roberts has form here, with its Revival line of DAB and smart internet radios long delivering an attractive, stylish retro design that is hugely appealing both to look at and to hold.

The Revival Petite 2 follows the same blueprint as the original five-star Petite: it's so tiny it can fit onto the palm of your hand and perch in any corner, narrow windowsill, bookshelf or cluttered desk. It is shorter than a can of fizzy pop, its footprint is narrower than a paperback book, and it's just a bit wider than an AirPods Pro 2 charging case.

The build quality is reassuringly solid and oozes high quality, and we love the rounded, smooth corners, soft but sturdy leather-like covering and colour-matched grille. It is available in seven attractive hues: sunburst yellow, duck egg, pastel cream, pop orange, dusty pink, midnight blue or black. The contrasting bronze trims, metal buttons and Roberts logo complete the look.

The OLED display screen is tiny but it is clear and has a strong enough contrast

## KEY FEATURES



Bluetooth



20+ hour battery



Seven colourful finishes

that you can read the text in any light. The screen is dimmable, too. What's more, Roberts manages to pack a whole lot of information into that small screen without it looking cramped. The radio station name, track/artist name, current source, signal strength, battery level icon and the time are all displayed neatly.

There are 20 presets you can save in total: 10 for DAB, 10 for FM. It is easy to save and recall stations using the control dial, and useful to be able to save so many of your favourite stations so you don't have to scan all the time.

The radio's long battery life of 20 hours returns, while a new edition for this '2' model is the 3.5mm headphone port, which replaces the 3.5mm aux input.

## Small is plentiful

If all that weren't enough, we are pleased to say that the Roberts Revival Petite 2 radio also sounds very, very good. Under the hood lies a 40mm driver with a passive radiator that provides this titchy unit's sound, but there is nothing tiny or diminished about the presentation.

Naturally, the quality of sound depends on your location/proximity to a radio transmitter and the quality of the station's streams, but once you get a

**WHAT HI-FI?**  
★★★★★

strong signal, the Roberts delivers a consistent sonic presentation across radio and Bluetooth.

You won't get huge helpings of bass from such a small box, but you do get a lively, rhythmically engaging sound that has a surprising amount of weight and punch to it, given the unit's size. The way it handles voices is a highlight, sounding clean, solid and detailed. Those voices - which come across as warm and natural - are admittedly given centre stage compared with music, but it's a balance chosen for talk radio that Roberts will have intentionally selected. The Petite 2 even reaches an impressive volume for its size, even if things begin to become a touch unruly at the very top end.

For £100, you get quite a lot from this petite portable radio, and it is an utter delight to use, hold and look at, as well as fun to listen to. Whether it's for your teenage kid, a friend or sibling, or your grandparents, we can see the stylish, versatile, enjoyable-sounding Petite 2 appealing to anyone who still values the humble wireless radio - with a significant amount of added extras.

**WHAT HI-FI?**

**RATING** ★★★★★

### SOUND



### FEATURES



### BUILD



### FOR

- Lively, engaging, punchy sound
- Clear, detailed, natural vocals
- Small, stylish and feature-packed

### AGAINST

- Small size limits bass depth and capability

### VERDICT

Packed with features and blessed with a clearer, richer, more dynamic sound than you would expect



# SVS 3000 Micro

**Finally, a micro subwoofer worthy of the name SVS.**

Many micro subwoofers have tried, all have failed. Until now. The mighty SVS 3000 Micro subwoofer unleashes **deep, room-filling, musical bass from a shockingly compact 10-inch enclosure**. Handsomely styled, the subwoofer's compact cabinet blends seamlessly into any HiFi or home theater system, energizing a space with astonishingly rich, detailed, and effortless bass.

SVS engineers defied the laws of physics designing a micro subwoofer capable of massive, pristine output. Amplifier technology from the reference flagship SVS 16-Ultra subwoofers was applied to create an **800 watt RMS, 2,500+ watt Peak Power Sledge STA-800D2 amplifier with discreet MOSFET output** for effortless, on-demand current with unerring control.

Harnessing the colossal power are **fully-active dual-opposing 8-inch SVS drivers** that deliver heart-pounding low end with pinpoint accuracy, without resorting to a compromised passive radiator design. Mechanical energy within the driver assembly is cancelled out solving the longtime curse of micro subwoofers "dancing" across the room.

3000 Micro has brains to match its brawn. **A 50 MHz Analog Devices DSP** enables sophisticated control and custom frequency response curves for optimized real-world output and acoustically tuned room gain. It also enables advanced tuning and control via the **SVS subwoofer DSP smartphone app**.



View offers

Mini LED TV | £3299 | whf.cm/SamsungQN95D

# Samsung QE65QN95D

A strong performing Mini LED set with a few frustrating quirks.

The QN95D is Samsung's flagship 4K Neo-QLED model for 2024. It's among a group of rather prestigious colleagues - the S95D and QN900D are its 4K OLED and 8K Neo-QLED counterparts and both are five-star stunners.

At £3299, the 65in QN95D is certainly priced as a flagship TV. It looks practically identical to the QN95C it is replacing, and features Samsung's 'Infinity One' design, so the bezels around the screen are slim and modern-looking, with metallic-looking edges that give the TV a premium feel. The set is much thinner than some notable Mini LED TVs we have seen recently, while it has a centrally mounted pedestal that connects to a rectangular metal base plate - or you can wall mount using the TV's 400 x 400mm standard VESA mounting points.

## A host of AI-powered features

If you're unfamiliar with Neo QLED, this is simply Samsung's term for combining a Mini LED backlight with Quantum Dots. It's a 4K VA LCD panel with 1344 separately controlled zones on this 65in model. Samsung has also included its wide viewing-angle technology to ensure that the picture looks consistent across a variety of viewing positions.

Samsung's Neo Quantum 4K AI Gen 2 Processor is shared with the S95D and, as well as playing an integral role in the backlight's local dimming function, powers a host of AI-led features.

The AI Gen 2 processor has more than 20 separate neural networks that it can tap into, which play a key role in upscaling SD and 1080p content to 4K and provide an enhanced three-dimensional effect to images through the Real Depth Enhancer Pro system. Samsung also includes its Auto HDR remastering feature, which means the TV will attempt to convert SDR content into HDR.

The QN95D supports HDR10, HLG and HDR10+, but not Dolby Vision. Dolby Atmos is supported, while Samsung's Q Symphony feature, which synchronises the TV's speakers with those of a compatible Samsung soundbar connected over HDMI eARC, is also present.

## KEY FEATURES



HDR10+

DOLBY  
ATMOS

Dolby Atmos



Mini LED

There are four HDMI 2.1 sockets on the rear, each of which is capable of handling full 48GB bandwidth signals, supporting 4K/120Hz gaming with VRR and ALLM.

The AI influence is also felt in the set's 4.2.2 channel, 70W sound system, with Active Voice Amplifier Pro (which brings dialogue forward in the mix) and Adaptive Sound Pro, which aims for an 'as the creator intended approach' using AI to optimise the sound performance based on the characteristics of your room and the content itself.

## Bright, crisp, well balanced

The Samsung QN95D is bright, crisp and fairly well balanced - the only problem is that we have it set up side by side with a 65in S95D, which has the unfortunate tendency of highlighting its Mini LED counterpart's deficiencies.

The QN95D makes a strong first impression, as it is immediately clear that the Neo-QLED set is brighter than its QD-OLED cousin. With the Blu-ray disc of *Oppenheimer*, outdoor scenes look vibrant and punchy, but not in an unnatural sense, while bursts of sun through windows make characters' faces shine.

We watch *Oppenheimer* in Filmmaker and Movie mode, which leads us to an interesting realisation: while Filmmaker is undoubtedly the more accurate, we find Movie to be the more enjoyable picture preset thanks to its slightly heightened brightness and contrast. Both modes offer well-balanced colours (though there is more subtle variation in the S95D) and motion isn't an issue with either.

Skin tones look well-judged, with a lively glow to actors' faces that doesn't make them look overtly orange - something some previous Samsung TVs have been guilty of. Colours still appear vivid and engaging, but we certainly approve of Samsung reining in its occasional overexuberance. Pair this with a crisp, well-defined picture that captures the finer details in both skin and environmental textures, and it has to be said that this TV can be really enjoyable to watch with scenes that lend themselves to its bright and sharp delivery.

The QN95D demonstrates another area in which it pulls ahead of the S95D - shadow detail. Finer textural details and patterns in dark suits seem to get a touch lost on the QD-OLED model, while the QN95D manages not only to retain them but also to deliver them with suitable definition. Lapels and stripes of dark suit jackets occasionally sink into a wholly dark mass on the S95D but remain distinguishable with plenty of detail on the Neo-QLED.

There are some notable oddities and downright deficiencies to the QN95D's pictures, though, that become even more apparent when watching the same scenes on the S95D. The first is a peculiar blue halo effect around particularly bright objects that seems to happen in certain scenes. During a black-and-white segment in *Oppenheimer* in which a committee meets at a restaurant, there is a subtle but offputting blue tint to the whole image. Wall-mounted candelabras and overhead lights, are plagued by a distracting blue aura - and this is with the TV in its 'Warm 2' Colour Temperature' setting.

This scene looks much better on the S95D, with a richer, more sepia-toned white to the image. This makes it look considerably more authentic, and it's overall a lot more pleasant on the eyes. The S95D also looks more three-dimensional and impactful with almost all of the content we watch, thanks to its better handling of contrast.

We watch a night scene later in the film in which the strip of land leading up to the testing site is illuminated with spotlights. Thanks to the S95D's OLED panel with its pixel-perfect light control, it looks very effective. The Mini LED-powered QN95D, on the other hand, does not get the same commendation. This shot looks frankly woeful on this TV, with big, blotchy light halos surrounding each of the spotlights, as well as a smudgy, navy tinge to the rest of the picture that clouds the remaining part of the dark scene. Tweaking the local dimming and Contrast Enhancer settings doesn't rectify things to a satisfying degree.

Four full-fat HDMI 2.1s support the latest gaming features



The 1080p *True Grit* on Blu-ray looks great on the QN95D, with excellent clarity and rich colours. The TV seems to have no problems displaying content at a lower resolution, as everything from skin textures to the sandy ground looks sharp.

Switching to an even lower resolution, *Three Billboards Outside Ebbing, Missouri* on DVD, is somewhat of a mixed bag. Edges of objects and characters look a touch soft, foliage looks blocky and colours lack subtlety. Some important detail is kept though, especially in faces, which look clear and retain some skin detail.

We are using our trusty *Blade Runner 2049* disc to test sound, as it features a particularly tricky scene with lots of bass and atmospheric warbling sounds. The *Flight To The LAPD* track that plays as Officer K returns to his base in the dystopian metropolis lacks weight from the QN95D, and while the higher frequencies sound fine, the bass response is very underwhelming. The TV does not project sound into the room to a great extent, nor does it make any great attempt to impress where dynamics are concerned. It does, however, extend the sound quite well vertically, making the soundtrack and dialogue feel a bit more spacious.

Speech is clear and easy to understand, even if the built-in sound system doesn't

**"The QN95D pulls ahead of its QD-OLED rival when it comes to shadow detail; it manages not only to retain finer textural details and patterns but to deliver them with suitable definition"**

provide much in the way of low-level dynamics, so we miss some of the finer details in the actors' delivery of dialogue.

Switching to Amplify Mode, the sound seems to open up slightly and it projects further too, but it severely impacts bass as a result. The deep, warbling bassline seems to completely lose timing with the rest of the track, to the extent it sounds rather unpleasant. As always, we advise pairing the TV with a Dolby Atmos soundbar.

Samsung's pricey Neo-QLED gets a lot right, picture-wise - its punchy and vibrant brightness creates dazzling highlights, and it digs out dark details that its QD-OLED counterpart seems to miss. Unfortunately, a handful of factors hold it back from true greatness: distracting visual oddities and a middling sound system are frustrating, and the blooming effect found in particularly dark scenes is very disappointing.

## WHAT HI-FI?

RATING ★★★★★☆

### PICTURE

★★★★★

### SOUND

★★★★☆

### FEATURES

★★★★★

### FOR

- Sharp and clear picture quality
- Handles dark details well
- Excellent gaming specification

### AGAINST

- Strange blue halo effect at times
- Poor bass control
- Expensive for a Mini LED TV

### VERDICT

A well-equipped TV that gets a lot right but has a handful of distracting picture quirks that hold it back from greatness

Neo-QLED combines a Mini LED backlight with Quantum Dots

# WHAT HI★FI?

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# I SPENT 24 HOURS IMMERSED IN DOLBY ATMOS MUSIC

## THESE ARE 8 KEY THINGS I LEARNED

*What Hi-Fi? deputy editor Andy Madden gained some interesting insights from the world of immersive audio on a visit to a Dolby Atmos studio*

**R**ecently I was lucky enough to be invited to Madrid to take part in the global media drive for the new Polestar 3 electric vehicle. The trip was based around the car's sound system, which is not only a new offering from Bowers & Wilkins but also a system that supports Dolby Atmos Music from compatible streaming services.

As part of the trip, I visited a Dolby studio on the outskirts of Madrid where Atmos content is mixed for music and movies. While there, I was able to experience the format from behind the mixing desk with the help of sound mixer Luis del Toro and David Ziegler, Content and Partner Relations Manager, Commercial Partnerships, Dolby, who gave a fascinating insight into the world of immersive audio production. Here are some of the key things I learned...

### 1 More artists are now mixing in Atmos Music

Dolby is quick to point out the popularity of Atmos Music among some of the world's biggest artists. "If you look at the top 100 streamed artists worldwide you'll find that 92 of them have already released



music in Atmos. And [at the time of writing] 84 per cent of the Billboard Hot 100 songs are available in Dolby Atmos," says Ziegler.

Speaking from my own experience, I have also found Atmos content easier to come across in the last couple of years, with multiple Atmos playlists appearing across compatible music streaming services. Of course, you need a compatible conduit to play the tracks through, be it a pair of spatial-audio-supporting headphones, Dolby Atmos soundbar or Atmos in-car sound system.

### 2 Fewer speakers tend to be used mixing music in Atmos compared to movies

The studio I visited had a system which featured 43 speakers for mixing movie soundtracks in Atmos, including a huge ceiling array and a high ring of speakers that surround the engineers. When mixing Dolby Atmos Music, the engineers switch to a lower ring of ten speakers, plus four ceiling-mounted speakers, making a 9.1.4 set-up. It was explained that because the mix has to translate into different environments, e.g. a car, living room or a pair of headphones, it is easier to start the mixing process using a smaller set-up.

### 3 Mixing music in Dolby Atmos takes time

When you think an average stereo mix can take anywhere from four to eight hours, creating a Dolby Atmos version can add a significant amount of time to the process, sometimes taking this to ten or twelve hours. According to del Toro, if you're not careful and don't have a clear initial concept, "you could spend a couple of days" on a single track, especially if you're dealing with multiple objects doing complex movements around the soundfield's different axes.

### 4 Atmos Music has muted the 'loudness war'

Since there's a -18dB limit on mixing Atmos Music, there's no point in pushing tracks louder and louder because you will just end up compressing the track more and more. In fact, I was told streaming services will reject Atmos mixes that go above this threshold. Because they have a lower ceiling, this is why you tend to find Atmos mixes sound quieter than their stereo

# Dolby



When mixing for Atmos, the engineers use a 9.1.4 set-up,



Mixing live performances in Atmos is about creating atmosphere

“Closing my eyes, I felt like I had been teleported to the venue with thousands of people around me”

simply put the stereo track into a piece of software and use an algorithm to upmix it to Atmos. “Even if you have to mix from something already produced, they [the labels] still have to send individual tracks, vocals, guitars, drums and backing vocals separated so you can do the mix,” says Ziegler.

## 7 Mixing a live performance in Atmos brings a different perspective

I had the chance to hear both traditional tracks and a live performance mixed in Atmos. The live performance wasn't really about the steering of individual sounds but the recreation of the atmosphere. Multiple mics are placed throughout a venue to capture the crowd from all angles. Closing my eyes, I felt like I had been teleported to the venue with thousands of people around me. It's perhaps a simpler way of capturing an immersive performance than a track mixed with 'objects' moving around a soundfield, but the demo was just as captivating.

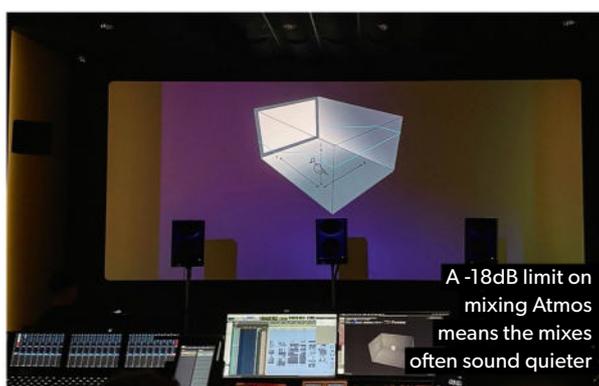
equivalents. You can still turn the volume up if you wish to make them louder, but with an Atmos mix, you're gaining dynamics as there is less compression.

## 5 Artists and engineers need to work together

With so many mixing options at an artist's disposal, there needs to be a clear concept or vision from the start, or else the focus of the music can be lost. As del Toro delicately puts it, “Sometimes I have to control the client.” If there is too much mixing of 'objects', sometimes you can lose the track's focus and detract from the artist's original intent. Mixing tracks in Atmos is a huge undertaking and there's a lot of back and forth between artist and engineer. Some artists go to the studio to mix side-by-side with the engineer, while others are sent a binaural mix so they can listen on headphones and give feedback.

## 6 Upmixing stereo to Dolby Atmos isn't allowed by streaming services

One of the stipulations for any labels wanting to put music on a streaming platform is that they aren't allowed to



A -18dB limit on mixing Atmos means the mixes often sound quieter



Atmos sound mixer Luis del Toro in the Madrid studio

## 8 The car is a good environment for Atmos Music

Next to having a full Dolby Atmos system at home, the next-best environment to experience the format is arguably in the car. “In a car, we don't need virtualisation – we have physical speakers around us. It's a very good translation from the studio environment,” says Ziegler. Of course, a lot of the performance will depend on the tuning and the quality of the in-car system to communicate the detail and the movement of objects around the cabin, but at least in this environment audio engineers know where people will be sitting and the size and shape of the room (cabin) they are in.

# INSIDER TOP FIVE LAUNCHES

## Five products to look out for this month



2

### Q Acoustics 3050c

£899

Q Acoustics returns to its roots with the latest iteration of its 3000 series speakers. This has been the brand's most affordable and well-regarded series, and the latest editions look to carry on that tradition. The 3050c are the new floorstanding speakers in this range (there is also a trio of bookshelf speakers and a dedicated centre speaker to complete a full 5.1 home cinema package). This updated range adds the Continuous Curved Cone (C3) midrange/bass driver, first introduced in the step-up 5000 series. Q Acoustics says that it aims to deliver a "sonic performance and high-quality design and build way beyond its class" with the new range.

● [whf.cm/QA\\_3050c](https://whf.cm/QA_3050c)

4

### Sony Xperia 1 VI

£1299

It's safe to say that Sony hasn't enjoyed the same smartphone success as Apple, Samsung and Google in recent years, so it hopes that switching to a more conventional 1080p 19.5:9 aspect ratio display will win people over. It is remaining dedicated to providing a quality AV experience, though, with a "tuned by Bravia" display that taps into the company's TV expertise, and it is also reportedly 50 per cent brighter than the previous model. The headphone jack even lives to fight another day with support for wired hi-res audio; and wireless audio fans are equally well catered for with the LDAC codec.

● [whf.cm/Sony\\_new\\_Xperia](https://whf.cm/Sony_new_Xperia)



1

### Marantz Model M1

£900

Marantz's Model M1 hi-fi system in a box continues the company's tradition of marrying sleek, eye-catching designs with decades of audio engineering pedigree. It seems as though Marantz is feeling the pressure from relative newbie WiiM, and is fighting back with this new compact streaming amp. It can be connected to a turntable, CD player or TV to add wireless functionality; simply add speakers. It has the HEOS streaming platform on board, as well as Bluetooth 5 for wireless connectivity, while direct connections comprise HDMI eARC, USB and optical. As for sound, Marantz says the M1 will have the "characteristic warmth and musicality of any Marantz product" thanks to reference-grade Marantz Music Digital Filtering DSP technology.

● [whf.cm/Marantz\\_M1](https://whf.cm/Marantz_M1)



3

### Sennheiser HD 620S

£300

Sennheiser is bucking the open-backed trend of the rest of its HD 600 range of wired headphones with the 620S. These closed-back cans feature a custom-tuned 42mm driver to deliver a "modern, airy signature that balances honesty with deep and articulate bass." Sennheiser says it has attempted to isolate the listener but still maintain some of the character of open-backed designs. They use an angled baffle for improved airflow and to mimic the behaviour of open-backed designs without the boxy sound you can get from closed-back alternatives.

● [whf.cm/Sennheiser\\_HD600](https://whf.cm/Sennheiser_HD600)



5

### Sonos Roam 2

£179

This revised version of the company's most affordable speaker isn't a huge departure, reportedly – in fact, it is touted to look and sound practically the same as its predecessor; but it does feature a few tweaks to enhance the user experience. The big news is a simplified Bluetooth pairing system that lets you bypass the home network set-up, meaning you will be able to connect wirelessly right out of the box via the new dedicated Bluetooth pairing button. It also comes in a handful of new finishes at launch, namely olive (green), sunset (orange), wave (blue), black, and white, with a new monochromatic Sonos logo adorning the front.

● [whf.cm/Sonos\\_Roam\\_2](https://whf.cm/Sonos_Roam_2)



# NEXT LEVEL JBL PRO SOUND JBL XTREME 4



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PMC PRODIGY 5

BOWERS & WILKINS 603 S3

TRIANGLE BOREA BR10

Q ACOUSTICS 5050

# TAKE TO THE FLOOR

**From pumping dance music to grand orchestral heft, these pillars of strength will deliver in spades**

**P**art of growing up, so we are told, involves learning to stand on your own two feet - both physically and (later) practically. By that measure, the average floorstanding loudspeaker is a very grown-up specimen indeed. For starters, most, by definition, provide their own means of support. Of course, most stand on four feet rather than two but, unlike their mounted cousins, none of them requires the addition of stands to function at their best. And the very nature of their large-cabinet design means that, regardless of their driver arrangement, they already have an advantage over their smaller cousins when it comes to delivering great sound.

The big plus here is weightier bass reproduction - something that standmounter speakers, with their smaller internal volume, find much more of a challenge. In addition, floorstanders are able to produce a sound of greater power and scale, and are therefore well suited to larger rooms, which most can comfortably fill - even at higher volumes.

For this round-up, we have entered premium floorstander territory, where prices fall between

£1000 and £2000. In this price bracket, the hardware offers a big step up in quality and performance from the sub-£1000 arena. That is because manufacturers have that crucial amount more cash in their budgets to spend on high-quality drive units, crossovers and other components. They can also pay more attention to the cabinet materials and all-round quality of build - all of which pays significant dividends for the buyer. In fact, this is arguably the sector that offers the best balance between performance and price.

The four speakers we have chosen to feature on the following pages ably represent, we believe, the best of this £1000-£2000 market. They are all from very 'grown-up' brands with decades of experience in loudspeaker manufacture. Three of the four particularly excel in those areas of scale and bass reproduction mentioned above, while the fourth - the PMC Prodigy 5 - winningly plays its own trump cards in other areas.

If your head is turned by the premium floorstander market, we feel sure one of these will pique your interest still further. So wave bye-bye to kids' stuff - here hi-fi reaches maturity.

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View online review  
whf.cm/QA5050

# Q Acoustics 5050

Grace and power at a really competitive price



**U**ntil we reviewed the Award-winning Q Acoustics 5040 floorstanders late last year, every stereo speaker we had heard from the company displayed a remarkable consistency of sonic character: refined, insightful and undemanding to match. These were the very qualities that made them so recommendable. Against the very best they could also be accused of playing things a little safe, reining back the drama in the music just a touch in exchange for an easier listen.

The 5040 floorstanders, and subsequent experience with the rest of the 5000 series, shows that things have changed. There has been a notable shift in emphasis, with dynamism, clarity and agility now more prominent, though at the cost of some loss of natural warmth.

But what happens if you take this Award-winning recipe and scale it up a bit? The result is the range-topping Q Acoustics 5050 we have on test here. The most significant changes between the two models are as follows: the 5050's twin mid/bass drivers are bigger (15cm vs 12.5cm) as is the cabinet (internal volume of 39.7 vs 27 litres). Visually, the new floorstanders look more dominating and certainly will benefit from being used in larger spaces.

## Best of both worlds

In overall terms, the basic engineering remains the same, the technical highlight being the use of a smooth, seamless profile for the mid/bass diaphragms. The shape of this Continuous Curved Cone, as Q Acoustics calls it, avoids the use of a traditional dustcap, and so allegedly sidesteps its inherent distortions, but is also claimed to incorporate the best characteristics of straight-sided and flared cone designs (namely bass, and control at higher frequencies, respectively). And the cone material? It is the same as in the smaller model: impregnated paper.

The crossover point between the twin mid/bass units and 25mm soft-dome tweeter is set at a fairly conventional

The cabinet feels nicely made and is rigid thanks to internal bracing

2.7kHz. The tweeter is vented and derived from the design used in the more upmarket Concept series. It is hermetically sealed and decoupled from the front baffle to provide isolation.

The 5050's larger mid/bass drivers necessitate a cabinet that is notably wider than the one used by its junior sibling. This enclosure feels nicely made and well finished. It is rigid too, thanks to carefully considered internal bracing. The front baffle is lined with a layer of butyl rubber (to damp resonances) and glossy black acrylic trim (to look nice). There are four finish options for the cabinet: Satin Black, Satin White, Holme Oak or Santos Rosewood. On first unpacking the speakers you will need to fit a pair of aluminium stabilisers to each one. These are each attached via a pair of Allen bolts and are an easy fit.

Take a look inside the enclosure and you will find four Helmholtz pressure equalising tubes. We first came across this unusual technique to control internal air pressure and reduce standing waves in Q Acoustics' high-end Concept 500 floorstanders. It worked well in that design and there is no reason to think it will not do the same here.

The 5050s' relatively high sensitivity of 91.8dB/W/m means that they will produce good sound levels with budget amplifiers, but they certainly deserve more talented partners. We think Arcam's A5 (£750) integrated or Cambridge Audio's similarly priced CXA81 are good starting points for amplification and should be used with similarly talented sources such as the Arcam CD5 CD player, Rega Planar 3 turntable or Cambridge CXN100 streamer.

To see how far the 5050 floorstanders can be pushed, we also use our reference

system of Naim ND555/555 PS DR music streamer, Technics SL-1000R/Vertere Dark Sabre MM record player, Cyrus Phono Signature phono stage and Burmester 088/911 Mk III amplifier. We have a pair of the Q Acoustics 5040 on-site for comparison, as well as PMC's Prodigy 5 floorstanders, KEF's LS50 Meta and our reference ATC SCM50 speakers.

## Spot the difference

The comparison with the smaller 5040 is an interesting one. Their common engineering is readily apparent in the excellent detail resolution, seamless cohesion from top to bottom and generally articulate natures. Take a look at the specifications and the 5050 is claimed to go only 2Hz deeper in the bass (37Hz vs 39Hz); but in use that translates into considerably more low-frequency heft and gives the speakers a calmer, more mature disposition. Despite that extra dose of bass, they aren't much fussier about room position. The 5050's lows are taut and articulate, displaying a surprising amount of control for a floorstander at this level. It means that they can be pushed closer to a rear wall than most similarly sized alternatives and still sound even. In our 3 x 7 x 5m (hwd) listening room, we can place them as close as 30cm to the rear wall without great issue. There are foam bungs provided in the box to block the rear-firing reflex ports should excessive bass prove a problem in your room, though using them does tend to compromise the sound's overall balance.

Get the positioning right and you will be greeted by some of the most controlled and articulate bass that we have heard from a tower at this level. As we listen to *Time* from Hans Zimmer's *Inception* OST it is hard not to be impressed by the depth and definition of the music's complex and oh-so-powerful lows. The 5050s sound composed and unstressed, even as volume levels rise.

But there is more here than just good bass. Given a little space to breathe and a slight angle towards the listening position, the 5050s generate a generous

**"The speakers make the most of the song's energy and prove deft at conveying its rhythmic drive"**



**WHAT HI-FI?**  
★★★★★

soundstage that is well-focused and nicely layered. The positions of sounds and instruments are stable and locked into place, even when the music becomes demanding.

Their tonal balance is still a touch forward, so it pays to take care with system matching. Out of the box, we are a little bothered by treble that sounds a bit hard and peaky. Over a few days of use, this trait calms down but can still bite if you partner these speakers with bright or aggressive amplification. Older generations of Q Acoustics are notably less fussy about partnering equipment.

Vented tweeter design is used in the more upmarket Concept series

**WHAT HI-FI?**

**SOUND**

★★★★★

**BUILD**

★★★★★

**COMPATIBILITY**

★★★★★

**FOR**

- Clarity and insight
- Strong dynamics, impressive bass
- Pleasing rhythmic drive
- Slick build

**AGAINST**

- Needs care in partnering
- Work best in larger rooms

**VERDICT**

Pleasingly mature sounding speakers that deliver impressive clarity and scale

**RATING** ★★★★★

**“It is hard to argue with the 5050s’ articulation and finesse when it comes to vocals”**

There is no questioning the clarity and insight on offer though. Like their junior siblings, these speakers dig up plenty of detail. They can delve into complex productions such as Steve Reich’s *Music For 18 Musicians* and deliver clear insights. They never sound confused, and manage to keep hold of a multitude of instrumental strands without losing track of the musical whole. That is not an easy thing to do.

We are impressed by the 5050s’ dynamic abilities too. They can go from a whisper to an orchestra at full bore effortlessly, while still having the skill to convey the nuance and passion in a solo voice - something made clear when we play Nina Simone’s *Mississippi Goddam*. In absolute terms, it would be nice to have a little more natural richness through the midrange, but it is hard to argue with the 5050s’ articulation and finesse in this region. The speakers make the most of the song’s energy and prove surprisingly deft at conveying the irresistible rhythmic drive of the piece. This rhythmic ability is confirmed when we listen to Massive Attack’s *Heligoland* set later on in our listening session, as is the speakers’ dynamic punch and enviable range of talents at low frequencies.

It would have been easy for Q Acoustics to mess up here. The smaller 5040s are excellent speakers and scaling the ingredients could have fallen flat. As it is, the Q Acoustics 5050 floorstanders do everything their junior siblings can do, but add an extra dose of authority and a slightly calmer manner. If you have the space and extra budget, this is where our money would go.

View online review  
whf.cm/BoreaBR10

# Triangle Borea BR10



## The BR10 deliver an entertaining performance thanks to their powerful, enthusiastic sonic style

**C**onceived as “affordable loudspeakers with no compromise”, Triangle’s Borea line has given rise to such five-star models as the exceptional BR03 standmounts and the Award-winning BR08 floorstanders, charming performers which dazzled us with their energy, vitality and irrepressible sense of sonic gusto. The Borea brand feels synonymous with such thrusting, vivacious sonic adjectives, and it’s those characteristics that we are hoping to see emulated with these new flagship floorstanders.

Billed as the highest-performing speakers in the range, they are also the most expensive members of the Borea family, a fact which only elevates our expectations. If those punchy, lively sonic characteristics can be blended with refinement and guile, the BR10 could become the jewel in what is already a very well-adorned crown.

Design-wise, the flagship BR10 are typical of the range, and while would-be buyers who seek a pair of towers to make an aesthetic statement may find the BR10 just a tad unremarkable visually, there is no denying the solid levels of build quality found with the speakers’ cabinets, drivers and rear-mounted terminals. These floorstanders are large, though, so you will need a room with plenty of space not only to get the best listening experience but just to fit these towers into your chosen space.

If the BR10 are visually in keeping with their esteemed siblings, internal tweaks and upgrades should give the flagship floorstanders the sonic edge. The three-way BR10 boasts a quadrumvirate of drive units, including a 25mm tweeter, a 15cm midrange and a pair of 20cm woofers. The 25mm tweeter incorporates a fabric dome construction alongside Triangle’s bespoke waveguide technology in pursuit of an enthusiastic, punchy sonic signature, while the towers’ 20cm bass drivers’ fibreglass membrane and powerful motor system aim to deliver speed and control at the lower registers. The crossover design has been constructed

The BR10 are the highest-performing members of the Borea range

especially for these flagship towers, with Triangle introducing a new architecture to the range via a separate crossover board, isolating the low-frequency circuitry from the mid-high range to prevent unwanted interaction between the two circuits. The new speakers also use an internal construction whereby the rear of the drive unit is wedged against a brace to make the mounting of the driver even more rigid.

### Peppy, punchy sound

We did use our high-end reference system of the Naim ND555/555 PS DR streamer and Burmester 088/911 Mk III amplifier, but the majority of our testing was performed with the Naim XS3 integrated (£2499), Arcam A15 (£1099) and, briefly, the more affordable Arcam A5 (£749).

What we found is that the Borea BR10 do need a little care with system matching, although they’re not so fussy as to cause deal-breaking issues. Thanks to their peppy, punchy sound, the BR10 work best with equipment that can tame their rowdier tendencies without cramping their style, a feat which the smoother, more open Arcam A15 managed nicely. The Naim XS3 is a fine option, but you may find that pairing two naturally enthusiastic components may lead to a slightly overbearing sonic marriage. Usefully, the BR10 are rated at a high sensitivity of 92dB/W/m and therefore don’t require an extremely powerful amp to reach high volume levels in most domestic spaces.

We found that around a metre away from a wall prevents the Triangles’ bass from becoming muddy or overly blobby. Note, also, that a low seating positioning can upset the speakers’ overall tonal balance; sitting bolt upright to bring us more in line with the tweeter gave a more

natural and even performance. Further, we avoided aiming both towers directly at our listening position to steer clear of an exaggerated, overly harsh treble tone.

This isn’t to damn them with faint praise, but the BR10 are not a difficult pair of speakers to get a handle on. While some models take a while to disclose their secrets fully or reveal their subtler hidden talents, the Triangles pick a sonic path and pursue it with relentless enthusiasm. Powerful, punchy and full of vigour, these are large speakers geared towards all-out entertainment on a large scale, even after substantial running-in time has slightly smoothed out their up-front tendencies.

### Weight and oomph

Play the right tracks through them and the French floorstanders will reward you in spades. Pearl Jam’s rocky *Dark Matter* feels tailor-made for the Borea - the track’s thumping percussive opening enjoys a suitably weighty salvo before those chunky, crunchy power chords enter with hurricane-levels of weight and oomph. Röyksopp’s *It’s What I Want* enjoys an even finer rendition as the full-bodied floorstanders highlight the track’s sparky, punchy nature, revealing plenty of wallop in the midrange while adding healthy helpings of lean, taut bass at the lower end.

These sorts of tracks unveil the speakers’ true strengths, in that they convey genuine spark, animation and punch without becoming messy or intermeshed while doing so. The BR10 may strain at the leash, but rarely do they snap it off and disappear into the metaphorical sonic shrubbery - tracks come over as focused and purposeful, but that well-ordered and grippy bass provides your music with a firm foundation rather than allowing any descent into a blobby, amorphous or unstable melange.

While rivals offer a more expansive soundstage, the BR10 keep things more tightly controlled within a relatively contained soundfield. Playing a recording of Delibes’ *Flower Duet* reveals the speakers’ strengths and weaknesses in this area, and though each vocal performance is placed

“There is plenty of wallop in the midrange with healthy helpings of lean, taut bass at the lower end”



“Bold flavours tend to dominate the subtler intricacies of more nuanced compositions”

that is highlighted with Muse's *Madness*, where we find Matt Bellamy's performance feels a little lean and lacking in personality when compared with such competitors.

Vital timbres and those attention-grabbing nuances can also become lost thanks to the Boreas' pursuit of the bigger picture, as bold flavours tend to dominate the subtler intricacies of more nuanced compositions. Beethoven's *Moonlight Sonata* is more authentic and texturally detailed when played through the Q Acoustics floorstanders, whereas the Triangles struggle to dig out the vital timbres of the piano performance with the same insight, detail or three-dimensionality.

This may matter to some more than others. Intimate, subtle recordings may not benefit from such a rowdy, raucous approach, but we get the appeal of a pair of large, full-sounding floorstanders that can go loud and proud without ever sounding messy or distorted. Even though we would like a little more detail and refinement, there are moments when the BR10 really seem to click - and when that happens, the effect is truly exhilarating.

The BR10 are a fine addition to the Borea family that will find an audience among buyers seeking a pair of substantial floorstanders that offer a big, bold sound at a reasonable price. If you have a large room that you plan on filling with peppy pop, heavyweight hip-hop or raucous rock, Triangle's larger-than-life floorstanders are screaming out for a place on your shortlist.

neatly between the two speakers, a touch more breadth and space would help create a more authentic, engaging reproduction of the original recording.

The burly floorstanders are certainly fun to listen to, but such a relentlessly punchy personality does have its drawbacks. Even if you give the BR10 an adequately large space and take appropriate care with positioning and matching, you may find them lacking in certain key areas of sonic finesse. Vocals, for instance, are not as detailed through the Borea BR10 as they are through the comparative Q Acoustics 5050 or the pricier PMC Prodigy 5, a flaw

We find the BR10 to need just a little care with system matching

**WHAT HI-FI?**

**SOUND**



**BUILD**



**COMPATIBILITY**



**FOR**

- Punchy sound with plenty of muscle
- Taut, snappy bass
- Comfortable at high volumes

**AGAINST**

- Need a large room to perform well
- Can lack sonic refinement
- Need some care with partnering

**VERDICT**

Great entertainers with a lively, vibrant sound that could do with just a little more refinement

**RATING** ★★★★★

View online review  
whf.cm/603\_S3

# Bowers & Wilkins

## 603 S3



### Pressure makes diamonds, but are these 603 S3 towers true gems?

**T**he much coveted 600 range from B&W has produced multiple *What Hi-Fi?* Award-winners in the past few years, including the 607 S2 Anniversary Edition and 606 S2 Anniversary Edition standmounts. The new series continues that trend with table-toppers in the shape of the 606 S3 and the 607 S3 standmounters. Our expectations then, it's fair to say, are rather high, and we are excited to see not only if the 603 S3 can live up to an almost royal legacy, but also whether they can outperform some very capable rivals at this level.

The general design of these floorstanders is relatively consistent with the rest of the 600 S3 range. Like their five-star standmount siblings, these are nicely made towers that look handsome, even if our white and oak test pair do have just a whiff of "Don Johnson's jacket from Miami Vice" about them. Still, other colourways are available, or you can double down and go for an all-white finish if you're truly stuck in 1984.

#### Sizeable speakers

The 603 S3 floorstanders are the largest and most costly speakers in the entry-level 600 series, packing in a 25mm titanium-dome tweeter, B&W's custom Continuum 15cm midrange cone and a pair of 16.5cm paper bass drivers. They are relatively sizeable, too, standing at 102cm high on their plinths and dwarfing the rival PMC Prodigy 5 by more than 10cm. Around the back you will find twin terminals - giving the option of bi-wiring. They are also rear-ported, and Bowers & Wilkins will supply you with a pair of foam plugs that can be used to lessen the impact of the bass response if absolutely necessary. It's a fine option to have, but we recommend using the plugs only if you are forced to place your speakers right up against the wall and want to mitigate some of the excessive low-end muddiness that will potentially result.

The speakers feature B&W's Continuum 15cm midrange cone

Like their standmount counterparts, the upgrades to most components and elements are rather extensive. The all-new titanium-dome tweeter, kitted out with an acoustically transparent grille mesh, promises "resolution and insight", while that Continuum cone has been designed to avoid "abrupt transitions in behaviour that can impair performance".

Much of the internal DNA and clever tech from the more costly 700 series has trickled down to the new 600 range, including a more powerful motor assembly for the midrange driver which, rather than using a conventional rubber surround, uses a special type of foam which is claimed to damp down resonances more effectively. The new towers also employ higher-quality bypass capacitors within the crossover and a longer tube-loading system for lowering the levels of unwanted radiation from the rear of the tweeter.

We use our reference system of the Naim ND555/555 PS DR music streamer alongside a Burmester 088/911 Mk III power amplifier at the start of our testing, but we spend much of our time using the 603 S3 alongside the more price-compatible Naim Nait XS 3 amp (£2499), a point at which the B&W towers are clearly more comfortable.

The 603 S3 are fascinating for several reasons, and that fascination only grows after spending a good deal of time listening to them. They're saddled with a fine name and a proud legacy, have quite a few serious rivals at this level and, most importantly, serve up a rather distinct sonic character.

We fire up a recording of Björk's *Bachelorette* and enjoy the weight, breadth and scale the 603 S3 bring to our

favourite Icelandic songstress's sumptuous, lush recording. There's fullness and weight to the rendition, with lots of drive and power that will please anyone looking for their music to enjoy a whole load of weight and muscle.

There's also real clarity and detail out on display, especially across an impressively exact midrange. Björk can be a seriously tough nut to crack, and many speakers and systems aren't able to bring out the intricacies of her lavish, layered productions, but the Bowers have absolutely no issue in revealing those details and nuances that truly make a track sing. Violin tones come through as vibrant and textured, while the whispers and idiosyncrasies of Björk's unique vocals are communicated to the listener with clarity and insight.

#### Sturdy and muscular

The 603 S3's sturdy, muscular aspect gives the speakers real authority and scale, and although our dedicated test rooms aren't exactly rivals for the Albert Hall, we can imagine that the Bowers would perform ably in a larger setting thanks to their powerful, potent sonic presentation. Play *Mombasa* from the *Inception* soundtrack and you will receive an engaging, forceful performance that benefits from the speakers' taut, focused yet undeniably robust bass.

That lower end is one of the speakers' trump cards, delivering plenty of pace and snappiness alongside real weight and force, driving the aforementioned track along with the sort of kinetic energy that gives you that sense of propulsion found in the on-screen chase sequence it accompanies. The new floorstanders are not only great at adding true lower-end robustness, they are also adept at bringing clarity and focus to each layer of a track's sonic presentation. This particular track can tend to sound overly messy and chaotic (and not in a good way) through less competent products, a trap that the 603 S3 avoid thanks to their talent for organisation, cohesion and control.

**"An engaging, forceful performance benefits from the speakers' taut, focused yet undeniably robust bass"**

“There’s real clarity and detail out on display, especially across an impressively exact midrange”

(£1995), our Award-winning rivals that just slightly expose the Bowers towers’ slight inability to cut loose and really have fun. The 603 S3 feel slightly restrained and dynamically flat, with a propensity to colour tracks with a refined yet slightly fettered sonic temperament. Whether you are listening to an old, swinging recording of Nina Simone’s *My Baby Just Cares For Me* or alt-J’s bold, textured *Dissolve Me*, there’s just a lack of dynamic verve and contrast that doesn’t allow for instruments and voices to truly express themselves to the fullest.

Delibes’ *Flower Duet* is a revealing example of this. Listening to the recording unquestionably provides us with a feeling of power and assertiveness from the opening vocal performance, yet there’s a subtle lack of conviction and energy to the delivery that we can only conclude comes from the Bowers’ slightly restrained nature. The spaces around the voice aren’t always convincingly displayed or communicated, and the singer appears to be giving us a rendition that feels a little like a rehearsal rather than the key performance on opening night.

With this in mind, the Bowers & Wilkins 603 S3 may be a pair of floorstanders that appeal to the casual market more than to genuine audiophiles looking for exceptional sound at this level. For very similar money, the PMC Prodigy 5 will offer more nuance, excitement and dynamic interest than the B&W towers. But, if you prioritise a robust, full sound that can go to levels their PMC rivals can’t reach, the 603 S3 still make a fair degree of sense.

That knack for control and authority is admirable in the above contexts, but a little less attractive in others. Ploughing through many of our favourite test tracks (and quite a few wild cards), we are somewhat struck, and a little disconcerted, by the sense that something is missing. The 603 S3 are lacking a certain *je ne sais quoi*, and it takes a good deal of listening and comparison with some high-class rivals to figure out exactly what it is.

Soon, though, the picture becomes clearer, especially when the 603 S3 go head to head with the PMC Prodigy 5

At 102cm high on their plinths, the 603 S3 are imposing towers

WHAT HI-FI?

RATING ★★★★★

SOUND

★★★★★

BUILD

★★★★★

COMPATIBILITY

★★★★★

FOR

- Weighty, full sound with plenty of punch
- Clear and detailed presentation
- Nicely made

AGAINST

- Occasionally lacking in fun
- Can be beaten for dynamic contrast
- Need some care with partnering

VERDICT

Floorstanders with a full, clear sound that can fill most rooms with ease, even if they are beatable for entertainment

View online review  
whf.cm/PMCProdigy5

# PMC Prodigy 5



## PMC's slimline floorstanders deliver a sonic masterclass

**P**MC has something of a reputation for high-end hi-fi, and while not everything the British brand produces is bank-breaking, anyone who has clapped eyes on the eye-wateringly expensive Fact Fenestria floorstanders will understand the company can certainly produce extremely premium products at similarly premium prices. The Fenestria, tested at £56,995, are undoubtedly some of the finest speakers we have ever had the pleasure of listening to, yet unless you are the heir to the McVities fortune or a very shrewd Bitcoin investor, chances are you will be saving for a long time.

That, then, is where speakers such as the Prodigy 5 come in. Despite PMC often producing high-end audio at the higher end of the cost spectrum, the Prodigy 5 floorstanding speakers, along with their smaller Prodigy 1 standmount siblings, have been explicitly designed to bring that distinctive PMC DNA to the mainstream, provided you still have a spare £1995 knocking around somewhere, that is.

The priority here, as becomes clear when you look closely at the Prodigy 5, is as much sound-per-pound punch as is humanly possible, as considerations over design and aesthetic flourishes fall by the wayside in the pursuit of the best audio you can get for the price. Want fancy metal feet? You'll have to settle for mostly plastic. Like a sumptuous oak finish? Be happy with that plain black casing. How about ornate, polished terminals? Perish the thought.

### Utilitarian look

All of this, theoretically at least, should be leading to a pair of speakers that, while utilitarian in appearance, knock it out of the park in terms of sonic performance. PMC is aiming to bring high-end audio to the man on the street with its Prodigy range, with the five-star Prodigy 1 standmounter living up to that ambition with startling confidence. Now it's time to see if the trick can be repeated with its floorstanding counterparts.

PMC has designed its drivers with the intent of "bringing the studio home"

As you will have already gathered from this review's introduction, the PMC Prodigy 5 are, in diametric opposition to the old maxim about Victorian children, designed to be heard rather than seen. Every spare penny has been invested in audio performance rather than visual flair, and to an extent that comes across before you have even connected to the Prodigy 5 and booted up your first test track.

Slim, black and lacking in any extraneous flair or add-ons, the Prodigy 5 are, as we have said, built to a modest, utilitarian philosophy. That being said, there's very little to call the Prodigy 5 actively ugly, and for a pair of floorstanders they are a long way from drawing the eye in an unfavourable manner. Rather, the slimline towers feel crafted to fade into the background, more as quiet sentinels standing in the shadows than showy centrepieces designed to make a visual statement.

Internally, the Prodigy 5 sport similar overall DNA to the smaller Prodigy 1 standmounts, featuring a 27mm tweeter accompanied by a 13cm mid/bass driver that, says PMC's head of design, aims to "bring the studio home". PMC claims to use the same core technology across both its flagship studio products and its home audio speakers, with the Prodigy 5's drivers aiming to fill a large space thanks to its transmission line technology.

At the bottom of each speaker is a pair of twin 'Laminair' vents designed to expand the headroom of the sound and which, says PMC, are responsible for expanding the dynamic range of audio reproduction, as well as reducing unwanted air noise in the process.

We use our reference system of the Naim ND555/555 PS DR music streamer

alongside a Burmester 088/911 MKIII power amplifier for the majority of our testing, but we find that the Prodigy 5 will work well with anything from the Award-winning Cambridge Audio CXA81 amp (£899) all the way up to the Naim Supernait 3 integrated (tested at £3499).

The Prodigy 5 are typical PMC speakers, in that they are unfussy and transparent when it comes to the equipment you pair them up with. The slimline floorstanders are easy-going and good-natured up to a point, meaning they are transparent enough to show you the qualities of a better amplifier but generally willing to reveal, rather than exaggerate, the faults in recordings or accompanying equipment.

### Enviably legacy

With their enviable heritage and that legacy for high-end audio showstoppers, we were excited to delve into what these slim, unassuming and affordable towers could manage.

Quite a lot, as it happens. It's clear from the outset that PMC has hit the sweetest of sweet spots with the Prodigy range, balancing subtle details and musical flourishes with a perceptibly heightened sense of presence, poise and confidence. Shrinking violets they may be to look at, but get the Prodigy 5 warmed up and firing and you will understand why the British brand decided on such a name. Prodigy by name, prodigy by nature.

Take their rendition of Björk's *Bachelorette*. A bold, brooding number that sees the elfin Icelandic ice queen at her overblown best, it's a complex, almost industrial ballad that requires as much of the surgeon's scalpel as it does the engineer's hammer to do it true justice. The Prodigy 5's rendition fulfils these contrary objectives without a hint of strain, matching Björk's distinctive, piercing vocal vulnerability with the full-bodied and cohesive instrumentation below, all the while revealing the kinks and subtle phrases inherent in such a carefully curated arrangement.

"For building a sense of contrast and drama, we can't think of a better pair of floorstanders at this level"



**WHAT HI-FI?**  
★★★★★

This is what really strikes us about the Prodigy 5, in that they seem to be adept at giving the best of all worlds without a hint of sonic sacrifice. While comparatively priced rivals substitute space for precision or dynamics for subtlety, PMC's unassuming towers are truly comprehensive performers. Fleetwood Mac's *Go Your Own Way* pops with drive and spark in the rhythmic verse sequences, but then fully blooms as it opens out into that iconic harmonised chorus. For building a sense of contrast and drama, we can't think of a better pair of floorstanders at this level.

Twin 'Laminair' vents are designed to expand the sound's headroom

**WHAT HI-FI?**

**SOUND**

★★★★★

**BUILD**

★★★★☆

**COMPATIBILITY**

★★★★★

**FOR**

- Gorgeous, refined sound
- Great value for money
- Unfussy about placement

**AGAINST**

- Inevitable aesthetic sacrifices

**VERDICT**

Natural vocals, refined bass, snappy rhythm and a supremely cohesive listening experience

**“Throw whatever you like at the Prodigy 5 and they will handle it as professionally as a concierge at The Ritz”**

What's more, they are a genuinely fun listen, the sort of speakers that you want to keep testing and probing to see how they convey your favourite tracks and arrangements. For all this talk of clarity, poise and wide soundfields (all justified, of course), the Prodigy 5 are an immensely diverting listen across almost all genres. Rock tracks such as Wig Wam's *In My Dreams* are invigorating and vibrant, hip-hop anthems like Jay-Z's *No Church In The Wild* are packed with flavour, while grand baroque pop, tested via Lana del Rey's *Born To Die* carry weight, depth and a real sense of scale. Throw whatever you like at the Prodigy 5 and they will handle it as professionally as a concierge at The Ritz.

They're not even particularly fussy about placement, and while you will get the best out of the PMCs by positioning them 40-50cm away from the wall to avoid some overly dominant bass, they are far from prima donnas in this regard. Angle the Prodigy 5 in slightly towards your listening position and you will receive an expansive yet well-focused soundstage.

PMC promised to bring studio-grade sound to the masses with its (relatively) affordable Prodigy 5 speakers, a task that could have led to some compromises in quality in the pursuit of more democratised audio. Happily, the Prodigy 5 fulfil their purpose expertly, and while pennies may have been pinched externally, every ounce of sonic performance has been squeezed from this expertly engineered pair of floorstanders. Rich, refined and endlessly rewarding, the Prodigy 5 see PMC succeed in its mission: this is just about as good as we have heard a pair of speakers sound at this price.

**RATING** ★★★★★

# High End

**T**he High End Munich 2024 show once again delighted our eyes and ears in May, with an onslaught of new product announcements. The *What Hi-Fi?* team were on the ground in Germany, and got hands-on impressions of all the latest hi-fi products - between currywurst and steins of beer, you understand.

Europe's biggest hi-fi show this year blessed us with product launches from Focal, NAD, Chord Electronics, Q Acoustics, Pro-Ject, Elac, Sonus Faber, WiiM and Luxman, while brands such as Tannoy, Mission, Quad, Audiolab, Epos and many more teased what they will be launching later this year.

With 1000 brands exhibiting and even more visitors than ever estimated to have strolled through the halls and atriums looking in awe at the latest designs and technological marvels from the world's finest hi-fi brands, the High End Society smashed it once again. Here is our pick of the best products to have featured at the Munich show.

(Below) ESD Acoustic brought this huge system to Munich

**1 Arcam SA45 / SA35**  
Arcam is taking the fight to Naim with two new all-in-one music streaming systems. The Radia range expands with the premium SA45 and SA35 models featuring Class G amplification, HDMI ARC and MM/MC phono stage, and hi-res full-colour displays.

**2 Vertere Calon**  
Vertere Acoustics introduced its high-end Calon phono stage at High End. The Calon is an exquisitely engineered MM/MC phono stage from a brand that brings a fresh approach to the phono design in every aspect.

**3 Mission 778CDT / 778S**  
We got our first look at Mission's 778CDT CD transport and 778S hi-fi music streamer, the latest separates to join the excellent, five-star 778X amp, and we are loving the compact, half-width chassis design.

**4 Fyne Special Production**  
Fyne Audio's Special Production speakers promise class-leading tech in a more affordable package. The new series bridges the price gap between the Vintage and Classic series, while the high-end SuperTrax tweeter module is designed to sit atop (most) speakers.

**5 Q Acoustics 3000c**  
This is the entry-level speaker range we have been waiting for for six years. New driver tech, refined cabinet bracing designs, new finishes and a rather reasonable price tag are the highlights of the latest model in Q Acoustics' 3000 speaker series.

"With 1000 brands exhibiting and more visitors than ever, the High End Society smashed it"



# Munich 2024

We were on the ground at Europe's biggest high-end hi-fi show. Here are the best products we saw unveiled



Cambridge Audio brought a little bit of Britain to Munich



**7 Pro-Ject Debut Evo 2**  
Pro-Ject's eye-catching deck is here to put the colour back into your records. The updated Debut Evo 2 turntable is a belt-drive design with Evo MM cartridge and an 8.6in carbon tonearm, aiming to bring unparalleled value and quality to a reasonable price point, says Pro-Ject.

**8 Focal Hadenys / Azurys**  
Focal's nature-inspired headphones follow in the Bathys' footsteps. Promising to make the "purity of high fidelity sound accessible to as many people as possible", the new open-backed Hadenys are arriving alongside the closed-back Azurys. Both feature Focal's 'honeycomb' earcup grilles.

**9 Technics SL-1200M7B**  
Technics has partnered with Lamborghini for the special-edition SL-1200M7B turntable. Based on the popular SL-1200 decks, it is available in three finishes and comes with a picture-disc record of the V12-engine sounds of six Lamborghini super sports cars.

"Audio-Technica's limited-edition wood headphones use hardwood typically used in musical instruments"

**10 Fiiio TT13**  
Fiiio's fully automatic Bluetooth turntable promises a modern, fun design. The new TT13 deck features large buttons for automatic operation, aptX HD Bluetooth streaming, built-in phono stage and LED lighting.

**11 Meze Alba / 105 AER**  
A trio of new headphones from Meze includes the new affordable Alba wired in-ears boasting a custom-designed 3.5mm to USB-C headphone adapter with a DAC built in, while new open-back 105 AER over-ear headphones were also unveiled.

**12 Dali Rubikore**  
Dali's new Rubikore speaker range packs flagship tech in five new models. Using trickle-down tech from the epic Kore and Epikore flagship speakers, the new Rubikore range brings new driver technology to a less high-end price bracket.

**13 Sonus Faber Sonetto G2**  
Sonus Faber brings flagship driver technology to its stylish Sonetto G2 speakers. The Sonetto G2 series consists of seven models and features new driver technology derived from the flagship, £700k Suprema speaker system, along with updated concrete base, reflect duct tech and a sleek new design.

**14 Sennheiser HD 620S**  
Sennheiser's HD 600 range of audiophile headphones is getting a surprise new addition. The new closed-back HD 620S cans feature custom-tuned 42mm drivers and aim to offer isolation while also using an

Popular brands were joined by the weird and wonderful of the hi-fi world



18



19



20



21



angled baffle for improved airflow, helping mimic the airy nature of open-back designs.

**15 WiiM Ultra / WiiM Amp Pro**

We awarded five stars to the Pro Plus music streamer from newbies WiiM, and the WiiM Ultra and WiiM Amp Pro are the company's updated, versatile, multi-tasking streaming units. Boasting new DACs, new features, extensive streaming and connectivity while still remaining affordable, the WiiM Ultra streamer (with a new design and touchscreen display) and Amp Pro streaming system are sure to be popular yet again.

**16 Audio-Technica ATH-WBLTD**

Audio-Technica's limited-edition wood headphones should sound like music to your ears. That's partly because these ATH-WBLTD cans are encased in three layers of hardwood that are typically used in musical instruments. But if you want them, you'll have to be quick as only 300 pairs are being made.

(clockwise from middle) TAD Labs room, Epos ES-28N, Vivid Audio's 13-driver Moya 1, Mataxas and Sins' Papillon reel-to-reel player, Burmester BX 100

**17 Astell & Kern Active P1**

A&K is taking on Sony with its new Active P1 player. This all-new music player sees the firm relaunching its more budget-conscious Activo sub-brand. The player features support for 32-bit/384kHz PCM and DSD256 audio files.

**18 Chord Suzi**

Chord teased its Suzi pre/power amplifier concept, and it's like Lego for your hi-fi. Designed by Chord's founder and owner John Franks, the new Chord Suzi modular concept includes a preamplifier and a power amplifier that boasts Ultima-derived technology.

**19 Elac Debut 3.0**

Elac updates its Award-winning Debut range with seven new speakers. The new Debut 3.0 series promises improvements with a brand new tweeter design, increased efficiency and compatibility and a sleeker finish.

**20 Final D7000**

Final's flagship D7000 planar magnetic headphones promise to bring the bass. After spending some time developing its range of wireless headphones, Final has returned its attention to its high-end roots with a new addition to its flagship line.

**21 Tannoy Autograph 12**

Tannoy's Autograph 12 speakers pay tribute to an iconic driver, 70 years on. The original Tannoy Autograph launched in 1954, seven years after the dual concentric driver was invented; and now a modern-day version is coming. These two-way floorstanders marry a 12in version of the iconic drive unit with a luxurious walnut-veneered birch ply cabinet.

"The Technics SL-1200M7B comes with a picture disc of the V12 engine sounds of six Lamborghini super cars"



RCA ROKU TV RK24HF1

TOSHIBA 24WK3C63DB



SAMSUNG UE24N4300

# MINI MARVELS

**While positively tiny in today's TV world, these compact, 24in sets could be just what you need**

**R**egular *What Hi-Fi?* readers will have noticed that TVs tested within these pages are becoming ever bigger, driven by the idea of a lovely 4K or even 8K TV that will fully immerse you in movie nights, or provide the kind of big-screen gaming experience that feels truly next-level. Screens as up to a projector-bothering 75in or even 115in seem to be where the big brands are putting their time and tech - yet, as the models on test here prove, there is clearly still a market for a TV at the relatively diminutive size of 24in.

Maybe it's for a bedroom, desktop, kitchen, or even as a portable option you can move from room to room; whatever you have in mind, a TV at the size we are focusing on here may be just the thing.

The trio of 24in TVs we have rounded up over the following pages have been picked for their impressive picture quality at their size and useful feature-set. While a panel at this size will likely struggle to produce enough brightness to really do HDR justice, high dynamic range in its most basic

form is nonetheless on the menu for two of the sets here, while the other, though only 'HD-ready', will still provide a bright, rich and detailed picture for the money.

Sound, obviously, will not project far from the tiny speakers packed into a set at this size, but that's not to say they won't do justice to the majority of use-cases a small TV will find itself in.

Of course, a TV at this size also represents a budget option, and these sets are extremely friendly on the wallet. So which should you choose? Luckily we're on hand to guide you, whatever it is you're looking for from a 24in set.

TV stalwarts Toshiba and Samsung, the latter of whose big-screen TV options we are far more used to seeing on these pages, are joined by a new name, RCA, whose Roku-powered 24-incher proves a match for the more established brands at this size. All three firms weigh (lightly) in here with sets that aim to bring you small-screen pleasure. So join us if you will on our travels into TV Lilliput - where small can indeed be beautiful.

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View online review  
whf.cm/RK24HF1

# RCA Roku RK24HF1

## Relative newcomer RCA delivers a pint-sized surprise



**R**CA's 24in TV is almost shockingly lightweight. Even with its ultra-basic feet attached, it weighs so little a toddler could easily tuck it under their arm and wander around with it. We guess this makes the RK24HF1 a particularly portable TV, but it also raises concerns about both the quality of its internal components and its ability to withstand any knocks it might incur while you, or your toddler, are carting it around.

The RK24HF1's bezel, rear and feet are all made from pretty basic-looking black plastic, and the bezel and rear are both more prominent than you might expect of a 2024 TV. The crisp RCA and Roku TV logos on the screen's bottom edge liven things up a bit, but overall the RK24HF1 looks a little dated and cheap.

The main features of the RCA RK24HF1 are its eye-catchingly affordable price and built-in Roku smarts. The Roku system's basic look is the well-researched result of a laser-focused desire to keep things as simple as possible for the end user, and it actually feels quite refreshing in its simplicity versus the much more complicated smart TV systems of more premium TVs.

RCA claims that the RK24HF1's screen is a premium LED affair capable of producing richer tones than its basic models. It uses a VA panel type, with a native HD Ready resolution of 1280x720. And yes, it does feel weird to be talking about HD Ready TVs again in these days where pretty much every TV you can buy is a 4K model. But

RCA keeps things simple with both its OS and picture settings

then we guess fitting a 4K pixel count inside a 24in screen would be way more trouble than it's worth given how little visible difference it would likely make to picture quality.

The RK24HF1's near obsession with keeping things simple extends to its picture features. Pretty much the only important tool available to you is the option to adjust the picture's brightness using simple one word descriptions - 'bright, brighter, brightest' and so on - rather than the usual rather meaningless numerical brightness adjustments. We would have appreciated a bit more fine-tuning over the picture settings, but it's hard not to admire how Roku tries to think like regular people do.

Unlike a surprising number of other 24in TVs, including the Samsung UE24N4300, the RK24HF1 does not support any form of HDR playback. Nor is there support for cutting-edge gaming features- but you won't find these gaming features on any other 24in TV either.

The RK24HF1's three HDMI inputs are particularly generous by small TV standards, and these are joined by a USB port, RF tuner input, headphone jack and an optical audio output. The connectivity also supports control of the TV via Roku's admirably straightforward iOS/Android app, as well as support for the Apple AirPlay, Apple Home, Alexa and Google Home wireless connectivity platforms.

### Surprisingly enjoyable

The RCA RK24HF1 Roku TV's picture quality - as with numerous other cheap and cheerful Roku-based TVs we have seen - is surprisingly enjoyable.

The first thing that strikes us is how bright it is. Even though it doesn't (arguably quite sensibly) bother trying to support HDR sources, its pictures pop off

the screen with much more intensity and punch than those of Samsung's UE24N4300. Which is, of course, just what you want from a screen that may well need to compete with the typically bright environments in kitchens, conservatories and the like.

RCA's claims that the RK24HF1's screen features a premium colour performance are backed up by a voluminous palette that has no trouble ensuring that saturations 'keep up' with the screen's surprisingly potent brightness. So instead of bright shots starting to look pale and faded, they actually just keep getting more vibrant the brighter they get. Just as they should.

While a lack of tonal subtlety can leave some bold colours looking a bit cartoonish at times, the RK24HF1 avoids the compressed, 'clumpy' look to areas of what should be fine colour detail during dark scenes that the Samsung suffers with.

The RK24HF1 sees off its Samsung rival, too, with its clarity and sharpness. This is arguably the most surprising strength of RCA's screen, given how often budget LCD TVs of all sizes tend to suffer with motion blur or poor colour mapping - but there is no question that it manages to deliver even tough stuff such as sports events and 24p films without suffering major resolution loss or lag.

The RK24HF1's sharpness helps pictures enjoy a good sense of depth and three-dimensionality too. It's a talent that proves particularly useful when using RCA's screen as a gaming display; and in the set's Game picture preset, input lag is a respectably low 33ms.

Inevitably, the RCA RK24HF1's pictures aren't without their limitations. The worst of these is its pretty uninspiring black-level performance. Dark scenes look quite grey or sometimes even a bit blue, especially in the set's default Standard preset - an issue

**"The RCA RK24HF1's sharpness helps pictures enjoy a good sense of depth and three-dimensionality"**

<https://worldmags.net>



Image: Under Paris, Netflix, Sofie Gheysens



that can also cause some subtle shading details to go missing in the darkest corners. This is one area where the Samsung definitely outguns RCA's cheaper rival.

The RK24HF1 handles dark scenes much better if you switch to its Movie preset, though, so it's not a washout for film fans. But, while the Samsung might deliver much deeper blacks and more shadow detail, the RCA's much higher brightness means that scenes containing a mix of dark and light content actually enjoy more contrast and punch.

There is a slightly crude feel to the RK24HF1's colour and sharpness, though, as if the colour processing can't render enough shades to reveal every tonal nuance, while the sharpness is being slightly forced - maybe by some background processing trick.

Overall, though, the RK24HF1's issues amount to much less than we expected from such an affordable TV from a relatively unknown quantity of a brand. Especially as the limitations are for the most part in areas where they do relatively little damage in the sort of usage contexts a 24in TV is likely to find itself in.

While it's not really saying much, RCA's little Roku TV sounds better than most

**The Roku set is surprisingly lightweight and thus very portable**

similarly small TVs do. It manages to get louder than expected given its flimsy bodywork, for starters, and combines that bit of extra volume with more direct impact for sharp sound effects. There's a reasonably rounded tone to the RK24HF1's sound, too, that extends to more than just dialogue. So while there is plenty of detail in the presentation, it doesn't sound unpleasantly shrill or clipped.

Its midrange even has a little headroom to expand into while playing escalating action scenes in games or movies, and the speakers manage to stage the various elements of dense mix moments surprisingly credibly.

There is a general slightly coarse feeling to the RCA RK24HF1's sound - just as there is a slightly coarse general feel to its

pictures. It's not bad enough to stop the set's sound from being consistently serviceable, though, which is about as high a compliment as we can usually pay to any tiny TV sound system.

While its picture and sound are a touch too rough and ready to earn the RCA RK24HF1 Roku TV an unqualified recommendation, it picks its budget battles intelligently enough, with enough awareness of what most of its likely buyers will most want a 24in TV to do well. And this makes it, in the end, a much better bet than we had expected it to be.

## WHAT HI-FI?

**RATING** ★★★★★

### PICTURE

★★★★★

### SOUND

★★★★★

### FEATURES

★★★★★

### FOR

- Good value
- Comprehensive Roku smart system
- Bright, crisp pictures

### AGAINST

- Dark scenes look a touch blue
- No HDR support
- Flimsy build quality

### VERDICT

Lacking in subtlety, but combining solid performance with a substantial smart platform and low price

View online review  
whf.cm/24WK3C63DB

# Toshiba 24WK3C63DB



## Did Toshiba just quietly deliver the UK's best small-screen TV?

**W**e have ended up developing rather a soft spot for the Toshiba 24WK3C63DB. It isn't the cheapest 24in TV out there, but there are plenty that cost much more, including Samsung's UE24N4300. And by the time you have added the 24WK3C63DB's thoughtful picture performance into the equation, £139 starts to look like really good value.

The 24WK3C63DB is better looking than most small TVs. The frame around its screen is quite compact by 24in TV standards, and its mildly glossy black finish contrasts neatly with the dark metallic grey of the included plate-style desktop foot. Both the screen and its mount look and feel reasonably well built, too - not as ultra sturdy as the Samsung UE24N4300, but certainly more robust than the featherweight feel of the 24in RCA Roku TV.

As with the Samsung and RCA models, the 24WK3C63DB uses a VA panel with standard (as in, there's no local dimming) backlighting. It sports a native HD Ready resolution of 1280x720 pixels and, surprisingly, supports high dynamic range

The set's contrast performance is good for its size, if viewed head-on

playback in the HDR10 and HLG formats. There is no playback of the premium Dolby Vision or HDR10+ HDR formats, but any sort of HDR support on a 24in TV must count as a bonus.

Another sign that Toshiba is trying to be quite ambitious with the 24WK3C63DB's picture quality is the presence of a couple of the brand's proprietary picture-processing systems: Tru Resolution for enhancing sharpness, and Tru Micro Dimming, which analyses the image in small blocks to better optimise the screen's picture settings frame by frame.

The 24WK3C63DB provides two HDMI ports, backed up pretty well by a USB port, a VGA PC port that can also be used for component video, an Ethernet network port, a composite video input (these sorts of legacy video connections are still a hit with 24in TV buyers, it seems), a headphone jack and, of course, an RF port to feed the built-in Freeview HD tuner.

The HDMI ports don't support any of today's advanced gaming features, but nor would we expect them to. At least the Toshiba does a pretty good job of not ruining your *Call Of Duty* skills by hitting a pretty reasonable 32.8ms of input lag when set to its Game picture mode.

### Impressive features

The 24WK3C63DB's smart features initially impress. The interface superimposes app links over the bottom of the picture you are watching rather than the home screen taking over the whole screen, which is a nice throwback to a simpler smart TV time. The menu structure is really clever in how it gives you access to the TV's features without eating into much screen real estate, too. There is also built-in support for Amazon

Alexa voice control, as well as Miracast so you can share your smart device's screen with the TV.

Provided you are able to sit almost directly opposite its screen, the 24WK3C63DB is a very effective picture performer. We mention this because it really is an unusually big deal with Toshiba's set. Any TV that uses a VA panel will lose colour and contrast if watched from much of an angle, but the angles you can watch the 24WK3C63DB from before the picture quality is affected are really exceptionally limited.

Viewed head-on, though, the 24WK3C63DB's contrast performance is excellent by small-screen TV standards. Its deepest black levels might not be quite as deep or natural as those of the Samsung UE24N4300, but they are significantly better than those of the RCA 24in Roku TV and seldom cause you to be distracted from what you are watching.

At the other end of the light spectrum, while it doesn't get quite as bright as the RCA Roku model (despite that model not joining this Toshiba in supporting HDR) the 24WK3C63DB is much brighter than the Samsung. So overall it delivers a marriage of good brightness and black levels that helps both SDR and HDR content enjoy a really balanced and eye-catching look that holds up well in both dark and light room settings.

The natural feel to dark scenes is enhanced, too, by the 24WK3C63DB's ability to pick out lots of shadow detail in dark areas, rather than crushing it out or greying it over as many budget TVs do.

Its colour handling is its best attribute, though. With small-screen TVs these days, especially at the more affordable end of the market, colours can tend to look either pale or gaudy, without much subtlety and naturalism in between. This Toshiba,



**"The set produces more immersive and engaging pictures than you may well have thought possible from such a small TV"**

Image: Under Paris, Netflix



though, achieves a colour-range wide enough to deliver at least a little extra impact with HDR content while also being subtle enough to ensure that heavily textured areas never look clumpy or soft.

**Nuance and clarity**

Skin tones are delivered with enough nuance and clarity to avoid the plasticky look all too many small-screen TVs suffer from to some extent when showing flesh, and wider tones are consistently realistic and believable. There are none of the frankly weird hues and 'black and white' moments that the Samsung UE24N4300 suffers from when trying to show HDR.

The balance of the 24WK3C63DB's colours is a credit to such an affordable TV too, with no hues drawing too much attention to themselves.

With a good sense of sharpness and detail to add to its mix of colour subtlety and balance, the set also delivers a more effective sense of depth than we had expected ever to see from such a small TV.

The 24WK3C63DB's very limited viewing angles aren't its only picture limitation, though. Very dark scenes can reveal some faint clouding from the backlight, and motion looks slightly softer

The TV has a native HD Ready 1280 x 720 resolution as well as basic HDR

than it does on the RCA Roku TV (though it also looks much crisper than motion on the Samsung 24N4300).

Its niggles, though, don't stop the 24WK3C63DB from ultimately producing more immersive and engaging pictures than you may well have thought possible from a TV of such diminutive proportions.

The 24WK3C63DB's audio isn't as impressive as its pictures - chiefly because it joins many of its small-screen rivals in not being able to get very loud or deliver much in the way of bass. This lack of bass means action scenes sound a bit thin and shrill, while the lack of power denies the sound any significant projection either forward or sideways, compounding the sound's somewhat 'trapped in' feel.

It's not all bad news, though. The speakers typically sound quite crisp and clean, and they remain free of distortion and dropouts with all but the most truly extreme soundtrack moments. Dialogue is always intelligible too - even if those speaking tend to sound a bit small.

While the Toshiba 24WK3C63DB doesn't do anything flat-out spectacular and requires you to work around extremely limited effective viewing angles, it also shows more sensitivity towards and appreciation for all-round picture balance, finesse and consistency than any of its small-screen rivals. The result is a TV that is far more immersive to watch than a TV this small and cheap really has any right to be.

**WHAT HI-FI?**

**RATING** ★★★★★

**PICTURE**

★★★★★

**SOUND**

★★★☆☆

**FEATURES**

★★★☆☆

**FOR**

- Balanced, engaging picture
- Good value
- Simple operating system

**AGAINST**

- Missing a few key streaming apps
- Sound isn't very powerful
- Very limited viewing angles

**VERDICT**

Limited viewing angles aside, this 24in Toshiba TV is much better than the price suggests

View online review  
whf.cm/UE24N4300

# Samsung UE24N4300

## Samsung's 24in TV ticks a lot of boxes, but should you buy it?



**F**irst impressions of the UE24N4300 suggest that Samsung really doesn't see it as just some 'throw-away' product. After all, of late Samsung seems more focused than ever on building an empire of big, bold, uncompromisingly high-end TVs. For starters, the UE24N4300 is remarkably heavy for such a small TV, suggesting the presence of some high-quality innards as well as the use of premium materials in the strikingly glossy black bodywork.

While we applaud the sturdiness of the UE24N4300's design, the finished result does look a bit clunky and old school, especially when it comes to the chunky width of the frame around the screen.

The UE24N4300 actually has quite a lot going on for such a small TV - starting with its inclusion of a fulsome implementation of Samsung's Tizen smart system. All the streaming services just about everyone could ever need are present and correct, plus the catch-up apps for all the main UK terrestrial broadcasters. You even get a full version of Samsung's own TV Plus service, which pulls together hundreds of channels of streamed content for anyone willing to go a little 'off piste' with their TV viewing.

This small TV boasts some fancy-sounding processing tricks

The UE24N4300 boasts a trio of fancy-sounding tricks: Micro Dimming Pro, Ultra Clean View and Purcolor. The first of these features, though, isn't some sort of true local dimming control system. Instead, it's a system where the image is broken up into a series of small blocks for more localised analysis so that the TV can do a more effective job of continually optimising playback.

Ultra Clean View uses one of those 'advanced algorithms' TV brands like to talk about these days to enhance sharpness and clarity, and reduce blurriness. Purcolor, finally, enables the UE24N4300 to produce and more accurately control a wider range of well-controlled colours than basic LCD panels - something that could prove handy for the screen's delivery of high dynamic range video (which is almost always accompanied by a wide colour gamut).

The UE24N4300's HDR support covers HDR10, but not Samsung's HDR10+ system for adding extra scene-by-scene data. Still, getting any sort of HDR support on such a small TV should probably be seen as an unexpected bonus - and most small TVs will likely struggle to produce enough brightness to really do HDR justice anyway. As you might expect given the near impossibility of fitting a 4K pixel count into such a small screen area, this is an HD Ready screen with a resolution of 1366 x 768, slightly higher than the 1280 x 720 pixel counts of many 24in rivals.

Two HDMI's are joined by a single USB port, a composite video input, an ethernet LAN port, an optical digital audio output, a terrestrial RF port, a CI slot and a component-video input. You don't tend to find composite and component video ports on today's premium TVs, of course, but either the UE24N4300 is built on quite an ageing core chassis, or else Samsung

thinks anyone buying a 24in TV in 2024 may be the sort of person likely to have quite a bit of 'legacy' AV gear lying around.

Gamers probably won't be surprised to hear that there is no support over HDMI for such premium gaming features as 120Hz feeds or VRR. Given Samsung's gaming prowess with its premium TVs, though, gamers might be a bit frustrated to learn that, while the UE24N4300 does carry a Game picture preset, even with this active the screen gets input lag down to only a fairly high 54.1ms. That's nearly two frames of delay with a 30fps game engine, which could be more than enough to get you repeatedly unfairly obliterated on reaction-time games such as *Call Of Duty*.

### Excellent black levels

The Samsung UE24N4300 gets off to a great start with an excellent black-level performance by small TV standards. Dark scenes look remarkably free of the tell-tale grey wash over everything that we expect to see to some extent with all miniature TVs these days. At the same time, there is nothing forced about this embracing of the dark side - dark scenes still contain plenty of subtle shadow detail, for instance, and there's a pleasingly neutral tone to black colours instead of the blue or green 'washes' with which many small or budget LCD TVs suffer.

There is no sign, either, of the brightness instabilities that can appear on some of Samsung's premium TVs as they try to combine their high brightness with good black levels. Great though it is to see such excellent handling of dark scenes on such a small TV, this is pretty much where the good news about its pictures ends.

Those good black levels seem to be at least partly a result of a pronounced lack of brightness by today's small TV standards. Its pictures look rather dull no matter what



<https://worldmags.net>

“Dark scenes contain plenty of subtle shadow detail, and there is a pleasingly neutral tone to black colours for a budget LCD TV”

Image: Under Paris, Netflix



source you are watching; the TV neither gets much joy out of its HDR support nor feels like a great option for the sort of bright kitchen or conservatory space such a small TV might very well be destined for.

The UE24N4300 feels even less like a Samsung TV with its sharpness. Its pictures generally lack that crispness and clarity we associate with Samsung TVs, while motion isn't handled at all well. Moving objects are affected by blurring and resolution loss while watching any type of source, and there is no setting that makes much difference to this issue. During dark and sometimes even mid-dark scenes, the set's colour delivery can also start to look quite compressed. So, for instance, the leaves of dark-green bushes can look clumpy and ill-defined, or skin tones can start to look plasticky and two-dimensional.

Colours generally tend to look a bit flat and muted too. This is again surprising given the TV's Samsung DNA, but it was confirmed during comparisons with its RCA and Toshiba rivals on the previous pages. Things become even more problematic if you try to watch HDR, as

The Samsung supports HDR in the basic HDR10 format only

colours actually start to look both more washed out (rather than fuller, as we had hoped) while taking on some really quite unconvincing tones. Skin tones look so washed out at times with HDR sources that they almost feel black and white, and stand out distractingly in the process.

Even at max volume the set never gets anything close to what you might call loud, and this lack of raw power means the sound also lacks dynamic range and impact, with high treble sounds tending to hum and warble while ambient sounds sound over-dominant and 'breathy'. There's precious little bass, either, to give the sound much balance or heft.

Dialogue is reasonably well-rounded by small TV standards, and there is a touch more impact to gunfire and the like than you get with some small rivals, but the lack of bass means the general tone is seldom comfortable on the ear.

The UE24N4300 delivers streaming services galore and black tones during dark scenes that may well never be bettered by a 24in TV. While this black-level prowess might be a big deal if we were talking about a bigger screen for serious movie night action, it actually feels quite a strange thing for Samsung seemingly to have focused on here. After all, a TV as small as this is likely to be used in a secondary room, where other picture factors such as brightness, colour and sharpness are likely to be more useful than super-deep blacks.

**WHAT HI-FI?**

**RATING** ★★★★★

**PICTURE**

★★★★★

**SOUND**

★★★☆☆

**FEATURES**

★★★★★

**FOR**

- Startlingly good black levels
- Excellent build quality
- Impressive smart system

**AGAINST**

- Not very bright
- Blurry motion
- Colour crushing

**VERDICT**

In some ways much better than expected of a tiny TV, but its picture is disappointing overall



JBL AUTHENTICS 300



AUDIO PRO C20



SONOS ERA 300

# INDOOR PLANTS IN FULL BOOM

**These premium wireless speakers are designed for use in the home - where they will raise the roof**

**H**ere in hi-fi world, nothing stands still for very long. And that is as true in the land of wireless speakers as it is anywhere else, as technological advances and design innovation constantly find their newest expressions in the marketplace.

These days, such is the number and diversity of wireless speakers on sale that to say we are spoiled for choice is, on the scale of understatement, akin to saying that smartphones have recently become quite popular. You can buy all kinds of models, from those no bigger than a large matchbox and costing just a few pounds, that you can pop in your pocket for a trip to the beach, right up to pricey large-scale, multi-function domestic devices.

Here, we are exploring the foothills of the premium market - £300-£500 - where there is a good deal of choice and, therefore, keen competition among brands. Though portable in the strictest sense of the word, these models are more accurately described as *transportable*. That is, their size and weight dictate that they are likely to spend most of their time in one place but can

also easily be moved around the house if required. Generally speaking, they are not best suited to serve as hand luggage on a day out, but their larger dimensions mean that they relish the task of supplying copious amounts of bass and comfortably operating at higher volumes.

Sitting pretty - mainly in a performance sense rather than an aesthetic one - in this market sector is the Sonos Era 300, a model that has been around for some 18 months now and which holds our 2023 Award for Best home wireless speaker £300-£500, thanks in no small part to the way in which it uses DolbyAtmos-friendly spatial audio.

True to that fast pace of change we mentioned, things have moved on since the Sonos was crowned last year, and there are now more challengers in the game. Chief among those are brand-new models from Audio Pro and JBL - the latter undercutting the Sonos by £100. All three models can operate via wi-fi or Bluetooth, and each has a voice assistant on board as well as the usual complement of music-streaming services.

So, can the reigning champion retain its crown or will the young pretenders usher in a new era?

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View online review  
whf.cm/Authentics\_300

# JBL Authentics 300



## Ice cool looks, but does the Authentics 300 give you chills or leave you cold?

**Y**ou know that one kid at school that you couldn't help but envy? The one who, aside from being tall, athletic and a hit with the ladies (or gents) also ended up getting solid grades, played in the youth orchestra and helped sick puppies down at the local pet rescue? Well, that's what the JBL Authentics 300 brings to mind, at least at first glance: a do-it-all polymath with the looks to match.

Two things strike us about the Authentics 300 wireless speaker right out of the gate. The first is how good looking it is, with its lovingly crafted retro design oozing class and sophistication no matter where we place it. The second is how versatile JBL's stocky unit is. Thanks to its portability, streaming smarts and twin voice-assistant capabilities, the Authentics 300 covers multiple bases.

### Emerging deals

Officially, this speaker retails at £380. But prices have already started to drop and, at the time of writing, you can pick one up for just over £300 on Amazon. For comparison, the new, mains-powered-only Audio Pro C20 will set you back around £450. If you want something similarly burly and substantial but which still bills itself as being 'portable', the Sonos Move 2 - tested at £449 - springs to mind.

Looks aren't everything, but they do matter. They certainly matter if you are as handsome as the Authentics 300, and while it's a chunky, substantial unit that makes the likes of the more portable JBL

Xtreme 3 seem slender by comparison, it's unquestionably easy on our eyes. That front "waffle" grill defines the unit's assertive, bold aesthetic, tempered nicely by a sleek metallic trim.

It's fun to play with, too, even if a few niggles temper our affections a little. The on-unit dials - one for controlling volume, the others for treble and bass - are smooth if a little cheap-feeling, with each one sporting some rather alluring under-lighting to show you how far up or down the scale you are. Under-lighting is always welcome, but a marked, graduated system might promote greater precision.

You could conceivably call the 300 a portable speaker, but that's something of a relative term. Yes, the 300 is 'portable', but only in the sense that you can move it from room to room via the substantial carrying handle rather than it being something that you can sling into a backpack and take to a slippery hillside. Think of lugging around a small, 4.9kg breezeblock with a handle rather than a burrito-sized handheld portable player, and you will be in the right sort of ballpark. If you are away from a wired connection to a power supply, there is up to eight hours of playtime on tap.

### Wireless options

The Authentics 300 provides wireless connectivity either via Bluetooth 5.3 or through wi-fi, the latter of which enables access to the likes of AirPlay 2, Chromecast and Spotify Connect. That makes it pleasingly flexible, and while we stress that you are unlikely to use it much in the great outdoors when the weather is bad (an IPX waterproof and durability rating isn't provided), Bluetooth means that you can still take it down to the end of the garden without being limited by your domestic wi-fi's range.

Operation is largely taken care of via the JBL One app, the brand's new(ish) platform which covers controls such as volume and equaliser, and provides a one-stop shop for those aforementioned streaming services and the dual voice assistants. It's an attractive and easily navigable app, and it is always a bonus when Amazon's Alexa works with applications and services that you don't necessarily have downloaded onto your device. We ask Alexa to "play Deadmau5 via Amazon Music" and she immediately grants access to the requested artist and platform despite the music service not having been loaded onto the source player we use for our tests. It's also great to see two voice assistants capable of working simultaneously - and rapidly.

If you don't fancy streaming wirelessly, the Authentics 300 has a 3.5mm socket around the back for wired connection to sources. And it is accompanied by an ethernet dock for wired internet, a USB-C port and the mains power socket.

On to the fun bit; and we will start off by saying that the Authentics 300 maintains its retro-rockstar aesthetic by pumping out a sound profile that could have been tuned to match the parodic tastes of movie rockers Spinal Tap. Bold, brash and in your face, the 300 doesn't so much present you with its sonic cargo as it does smack you around the head with it. If the 300 were a waiter, it would be shoving your meal down your neck before you had even had a chance to check the wine menu.

Hyperbolic culinary metaphors aside, there's a lot to like about that keen, forward style. Even though the JBL could be better organised and more cohesive in its overall sonic ethos, there's undeniably a sense of fun to the experience that grips you and refuses to let go. Alt-J's *In Cold Blood* is bold, assertive and confident, and

The controls feature some rather alluring under-lighting



**"Sonically, the JBL is something of an acquired taste, but then oysters and Björk are both popular"**



while vocalist Joe Newman's nasal tones can be overly exaggerated by the 300's industrial edge, the overall effect is undeniably visceral and engaging.

### Character-revealing tone

It's snappy and fun, too, and often does a fine job of digging into a song's given musical personality. Elvis Costello's *Alison* is a naturally thin recording, kicking off with a bluesy, soulful guitar lick that the JBL really seems to just 'get'. A more consummate performer such as the five-star Audio Pro C20 will smooth out some of the track's excessive sharpness, but that is a mains-powered rival that will cost you an extra £70. After a time, though, that impetuous presentation might start to lose its lustre. Tweaking the EQ settings to tone the mid- and upper ranges down a fraction alleviates the symptoms but is not a complete cure.

It is also not the most organised speaker we have ever heard, as there is a slight tendency towards sonic messiness. The Audio Pro C20 does a better job here, and even compared with the smaller, cheaper JBL Xtreme 3, the 300 seems a little cluttered by comparison. It packs in more detail than the Xtreme, but its smaller,

The front 'waffle' grille gives the JBL a bold aesthetic

Bluetooth-centric cousin often shows greater restraint and cohesion.

The JBL Authentic 300 has a lot to recommend it. Its offering of Bluetooth and wi-fi streaming alongside twin voice control and battery-powered portability make it worthy of the jack-of-all-trades title, and while it's likely to settle down into becoming a handsome mainstay that you move from room to room at home

rather than your next camping buddy, we are impressed with the range of use cases we found for the speaker during our tests.

Sonically, it's something of an acquired taste. That's not necessarily a bad thing - oysters and Björk are acquired tastes, but both are popular. Still, while the Authentic 300's vivacious audio profile might sometimes stray into outright brashness, lovers of an assertive, front-footed performance will find much to enjoy from JBL's retro rockstar.

## WHAT HI-FI?

RATING ★★★★★

### SOUND



### FEATURES



### BUILD



### FOR

- Nicely made and a treat to behold
- Forthright, bold and assertive sound presentation

### AGAINST

- Can stray into sonic brashness
- Hefty for a portable speaker
- On-unit controls could be improved

### VERDICT

Charming retro looks, seamless usability and a confident (if sometimes unrefined) sound

View online review  
whf.cm/Era300

# Sonos Era 300



## Sonos's wireless speaker is an immensely immersive experience

**T**he Era 300 is a wireless smart speaker that comes packing all the goodness and seamlessness of a Sonos system, with a key stand-out feature that Sonos believes is the next generation of sound: spatial audio.

Spatial audio features in Dolby Atmos-soundtracked movies, TV shows and now music. Spearheaded by Apple, 'spatial audio' has turned into a catch-all term that covers any music that uses the Dolby Atmos format to create multiple channels of audio (beyond the standard two) to deliver a greater sense of immersion.

Like or loathe its bulky, "cinched hourglass" design, it's one born out of necessity. With spatial audio playback being the Era 300's focal point, this means a carefully considered but unusual arrangement of drivers and amplification that can fire out sound in all directions to deliver that 'immersive' audio experience - while still keeping a familial Sonos look.

Inside the Era 300 are four tweeters (one forward-firing, two side-firing, one upward-firing) and two woofers angled left

The 'cinched hourglass' design helps to fire sound out in all directions

and right for stereo playback. Custom waveguides help direct sound out forwards, upwards, left and right to surround you with music. Each driver is also powered by its own class-D amplifier.

That upward-firing tweeter is Dolby Atmos-specified, loaded into a directional horn and designed to reflect sound off the ceiling when playing Dolby Atmos music.

The build quality is up to Sonos's typically high standards, and it is a breeze to use. On top, a refreshed interface, with a volume-slider dented into the speaker to help users glide their finger across to change the volume, is satisfyingly responsive, as are the touch-capacitive buttons for playback and voice control.

The Era 300 is platform-agnostic, so that regardless of what device or streaming service you use you can play the music you want through the Sonos speaker.

There's a small caveat for spatial audio playback. At launch, only Dolby Atmos Music from Amazon Music Unlimited and spatial audio from Apple Music are supported. This is still wider compatibility than the HomePod 2, which supports spatial audio only through Apple Music.

The Sonos Era 300 can play music both over wi-fi (Wi-Fi 6 is supported) and Bluetooth 5.0, with the basic SBC and AAC codecs on board. Bluetooth pairing is incredibly quick - a swifter process than we have seen in any other Bluetooth speaker.

There is a USB-C port for wired connection to sources such as turntables. You will need a specific Line-In Adapter if you do want to use this connection though, and this will cost you an extra £19.

AirPlay 2 returns, along with 24-bit/48kHz hi-res music support from Qobuz and Amazon Music. Voice control is also supported - via Alexa for all your smart home needs, or through Sonos's own voice control that deals with music playback

only. We find it responds well to our simple commands and the mic picks up our voice over the loud music being played.

Playback from a huge number of streaming services, multi-room and stereo-pairing and more can be controlled through the excellent Sonos app, which is well featured and seamless to use.

Here you can tweak the speaker's EQ settings for treble and bass more finely, and initiate Sonos's Trueplay room calibration (iOS and Android) that optimises the Era 300's sound to suit the room it's in. We find it makes the Era 300 clearer, more focused and less boomy in the bass, and we recommend taking advantage of this feature.

The Sonos Era 300 can be used as Dolby Atmos surround speakers, delivering multi-channel rears. These can be used with the Sonos Arc and Beam Gen 2 soundbars and Sub to create up to a 7.1.4 Dolby Atmos home theatre experience.

### Solid, cohesive sound

Listening via Apple Music and Tidal for stereo music, and Amazon Music Unlimited and Apple Music for spatial audio with Dolby Atmos songs, the first impression we get with the Era 300 is of scale. The spread of sound is immense from a single wireless speaker box. It projects sound further into the room and overhead more confidently than any rival.

What is just as impressive is how solid and cohesive it sounds. Whether you are listening to plain ol' stereo or spatial audio tracks, the rich tapestry of instruments and vocals all feel apiece. There's solidity, ample detail and fluid dynamics to each song, whether you are listening to an '80s rock anthem or a piano-led classical piece. Songs are thrown out into the room with the kind of scale and power we normally hear from much bigger speakers.

**"The spread of sound is so convincing that it is hard to pinpoint where exactly the music is coming from"**





The music's rhythm is grippy, with ample grunt and impact to the low end; where you can hear the smaller Era 100 speaker straining against its physical limitations at times, the Era 300 has no such restraints. The meaty, taut, propulsive bassline in Rage Against The Machine's *Bullet In The Head* is gorgeously textured and effortlessly delivered. The crunchy guitars and spitting vocals are just as impactful; there's punch and muscle alongside subtle but powerful dynamic shifts that keeps everything flowing.

With spatial audio with Dolby Atmos tracks, the sound is flung far from the Era 300's box. The ominous choral intro to Sam Smith and Kim Petras' *Unholy* is delivered as a wall of sound that fills the room and envelops you. The sound goes far beyond the confines of the speaker and the spread of sound is so convincing that it's hard to actually pinpoint where exactly the music is coming from. The spatial audio effect, for the most part, doesn't feel separate from the original musical intent; it sounds more immersive – something we haven't encountered before with so much enthusiasm. How well the effect is communicated does vary depending on the song and how it has been mixed for spatial audio, but for the most part we enjoy the effect from the Era 300. It's worth noting that spatial audio tracks can only be played over wi-fi, not Bluetooth, on the Era 300. In the app's settings, you can adjust the height channel's level to suit

**Spatial audio is the stand-out feature of the Sonos Era 300**

how loud or intense you want the effect to be. We leave it at zero after some experimentation, as it comes across the most balanced with the rest of the sound.

### Fluid dynamics

We continue listening to tracks we know and love in spatial audio (*Rhiannon* by Fleetwood Mac, *No Diggity* by Blackstreet, *Come Together* by The Beatles) and it's the same story: it all sounds detailed, engaging and accomplished. And it's fun, too.

In comparison, the HomePod still retains its rich texture and wonderful sense of musicality, but we are struck by how small-scaled it sounds next to the Era 300. When it comes to spatial audio tracks, we once again run into the issue that, depending how songs are mixed, it will have an impact on the output from each speaker. For the most part, the Era 300 outdoes the HomePod 2. There's more power and punch, more convincing shifts in dynamics, and there is more

detail and subtlety around each note. The Era 300 relays the rich harmonies and decaying reverberations around the piano notes in *Light Of The Seven* from the *Game Of Thrones* soundtrack, while James Blake's *Limit To Your Love* is breathtaking with its cavernous scale and gut-punch impact of the plunging, deep bassline. This is a very mature, very assured performance from the Sonos.

Sonos's mission to deliver a great spatial audio experience from a single wireless speaker is a success, but that metric alone isn't what makes the Sonos Era 300 an all-round enjoyable speaker. It performs admirably with any format of music you throw at it, no matter what source or genre. The addition of Bluetooth streaming, not to mention the vast array of features you get from being part of Sonos's seamless experience, goes a long way toward justifying the rather high price tag attached to it. It all adds up to an enticing experience that is worth embarking on.

## WHAT HI-FI?

**RATING** ★★★★★

### SOUND



### FEATURES



### BUILD



### FOR

- Immense scale
- Detailed, spacious, dynamic and cohesive sound
- Punchy, impactful, deep bass

### AGAINST

- Adapter for wired connection is an extra cost
- Unique design won't be to everyone's tastes

### VERDICT

Huge scale of engaging sound, wide range of features and seamless Sonos experience

View online review  
whf.cm/AudioProC20

# Audio Pro C20



## This multi-talented wireless speaker can do it all

**C**an a one-box speaker really do it all? In recent years, a few brands have proved that, actually, they can - with products such as Naim's Mu-so and the Sonus Faber Omnia among them.

Now, Audio Pro fancies dipping its toe into this market with the Audio Pro C20 - its biggest, most powerful and most impressively specified speaker to date. The C20 wants to do it all, across a range of wired and wireless inputs, to give you the ultimate flexibility in listening for less than £500. Lofty ambitions then; but does the C20 meet them?

The Audio Pro C20 is the company's largest and most expensive one-box wireless speaker, and is the flagship speaker of its popular C-Series. At £450, it isn't exactly cheap. But then rivals such as the Naim Mu-so 2 (around £899) or the Sonus Faber Omnia (£1599) offer similar functionality to the C20, but will cost you significantly more for the pleasure.

There will be performance differences here, of course, but for a one-box system, it's a pretty competitive little package.

### Minimalist look

The Audio Pro C20 looks a lot like every other Audio Pro wireless speaker that has come before it. It's very neat and very Skandi - a simple rectangular box, with clean lines and very little in the way of flash or flourish. Minimalist fans rejoice.

Up top, there is a chrome control panel (silver on our white sample, but gold and gunmetal on the grey and black finishes respectively), and it comes with a

magnetic removable fabric grille, so you can choose to hide the striking driver design now synonymous with the brand, should you so wish.

At 196 x 410 x 220mm and 6.2kg, this is a big, weighty speaker; once set up, it is very likely to stay put. There is no battery power here, as there is in its smaller C3 sibling, so there's no leather handle for moving it around. That makes sense, but we do miss having the handle a bit. It means you will have to bear-hug the C20 into position - thankfully the bass port at the back gives you some good leverage for hoisting it out of the box.

As with all Audio Pro products, there is no question here when it comes to build quality - it's top notch. Everything feels solid, from the cabinet build and paint finish to the confident clickiness of the buttons on the control panel.

### A does-it-all solution

As we have alluded to, this single-box speaker really does want to do it all when it comes to your music playback. As far as physical connections are concerned, turn it around to its back panel and you will find a set of RCA inputs, a moving-magnet phono stage for your turntable, an optical out for digital sources, an HDMI ARC for connecting it to your TV and a sub out for adding a subwoofer into the mix.

For wireless playback, you also have AirPlay 2 and Google Cast for playback over wi-fi up to 24-bit/96kHz and Bluetooth 5.0 built in. There's even Spotify Connect and Tidal Connect for direct control from within those apps, plus Audio Pro's own multi-room offering too.

This allows you to stream the same music across all the Audio Pro speakers in your house, including music that is playing back via an input, such as a turntable or CD player.

You can set up multi-room playback in Audio Pro's simple but effective control app, where you can also team two C20s in a stereo pair. It is also here that you will find the straightforward process to get the C20 onto your wi-fi network.

Control on the speaker is done via the top control panel. Here there are playback and volume controls, a Bluetooth pairing button, a power button and a source select - you can see which source is being used via a single LED light under the six options (wi-fi, TV, phono, line, opt and BT).

Finally, six presets can be set to a particular input or streaming service, or even a particular song or album - simply hold one of the preset buttons down for three seconds on the content you would like to store, and you're set. You can also do this within the app if you prefer.

The C20's striking driver design is represented here by a single 16.5cm woofer at its centre and two 25mm tweeters either side. These are powered by one 130W and two 30W Class D amplifiers, for a total power output of 190W. For a speaker at this size and price, that's not bad at all. That power translates to playback too, with the C20 serving up a big yet refined sound when we first take a listen using Tidal Connect.

And while its wide, open soundstage can fill our test room with ease, this isn't a speaker that's all about showing its muscle above all else. There might be power and bass weight by the bucketload here, but there's focus and clarity too.

Playing *Baddadan* by Chase & Status, the C20 shows both its authority and dynamic capabilities from the off. While there is nothing tame about this big drum'n'bass track, it's a song that does have light and shade - it builds in intensity, from the more stripped back intro to the busy, bass-heavy chorus, and the C20

There are plenty of playback options here, and multi-room too



**"The subtlety at play in the C20 helps it to relay every last drop of the emotional, haunting vocal"**



## WHAT HI-FI?



doesn't miss a beat. It reaches deep to reproduce those synth-y bass notes, but keeps them packed with detail and texture too. There's nothing boosted or artificial about the bass response here either, so it also sounds natural and rounded - never bloated or overpowering.

It does this alongside a well-integrated midrange that is never dragged down by any of the weight below it. It also avoids ever sounding separated or detached, creating a very cohesive and "together" sound, no matter how busy things get in a mix. Strip things back to *This Woman's Work* by Kate Bush and the C20 shows how it can handle something much more delicate too. The subtlety at play in the C20 helps it to relay every last drop of the emotional, haunting vocal just about as well as we have heard at this level.

### Plenty of bite

The treble in some of Audio Pro's more recent speakers had started to lean towards sounding overly bright, but we are pleased to hear that the C20 wrestles back control here, serving up an open, airy response that never verges on harshness.

There is plenty of bite where it's needed too. The cymbals in System Of A Down's *Aerials* can really grate on the wrong speaker, but the C20 delivers them with clarity and snap. Playing the same tracks on the Sonos Era 300, the C20 bests this five-star Award winner in just about every way.

Looks like a koala, sounds like a five-star wireless speaker

Arguably, the Era 300 is looking to do things differently to the C20, with a focus on projection and creating a 360-degree soundscape. But the C20 has a better, deeper bass response - no doubt helped by its bigger cabinet - and there's more detail and insight across the board.

The midrange is more forward on the Sonos too, which can give it a sense of greater energy and enthusiasm; but when compared with the C20, it can sound a little detached from the overall presentation.

The Era 300 remains a superb speaker at this price, but for someone who isn't focused on spatial sound, and who isn't too concerned about the Sonos ecosystem, the C20 is a far better way to spend £450, particularly if you want to stretch your system beyond wireless sources.

We switch from our Tidal streaming to listen via the optical input. Arguably, everything stated about its performance above becomes all the more clear. The presentation tightens up a bit more, there's a touch more fine detail up for grabs, and dynamically it takes the ebb and flow of tracks up a notch too. There is no change in character here - it sounds the same as it does wirelessly, just a little bit better.

HDMI works well too. Dialogue is focused and projects well towards the viewer, and there's no lack of power and bass punch for movies either. The size of the C20 won't work for all TV set-ups though - you'll want it placed centrally beneath your TV for the best performance, so just make sure you have space for it.

There is an end to the good news though, and that's when it comes to the phono stage. We use it to play Michael Jackson's *Thriller* album on our reference turntable and everything just sounds a bit flat and undynamic. It will work if you're in a pinch, but even the most budget of external phono stages will give you a better performance here - the difference is night and day. That's not enough to dampen our overall enthusiasm for its performance - just don't rely on its phono stage to make your records sound their best.

The Audio Pro C20 is a fantastic wireless speaker that can do a lot of things, and almost all of them very well indeed. The performance up for grabs here is so authoritative, and so detailed - it offers a taste of hi-fi in wireless speaker form. If you have the budget, space and system to make use of the C20's many capabilities, we struggle to think of another wireless speaker that comes close.

## WHAT HI-FI?

RATING ★★★★★

### SOUND



### FEATURES



### BUILD



### FOR

- Big, detailed sound
- Great connectivity
- Solid build

### AGAINST

- Poor phono stage
- Awkward size for TV use

### VERDICT

A fantastic, multi-talented wireless speaker that delivers in almost every way



YAMAHA TRUE X



JBL BAR 1300



SAMSUNG Q990D

# RAISING THE BAR

## Elevate your home cinema sound with this trio of convenient soundbar packages

**A**s TV sets get thinner, the space for proper drive units that can deliver a high-level audio performance decreases. Manufacturers are constantly developing new ways to enhance their TVs' built-in speaker capabilities, but it's generally best to let the screen handle visuals and delegate audio responsibilities elsewhere. And this is where a soundbar or a full home cinema surround system comes in.

For a truly immersive home cinema experience, the latter is the best way to go - but a full home cinema package of speakers plus AV amplifier can be both costly and space-consuming.

A relatively compact soundbar that sits under your telly is preferable for many. But, what if you could have a soundbar plus surrounds and a sub for relatively little outlay, in a way that doesn't take up anywhere near as much space?

Soundbar-plus-subwoofer packages have been commonplace for a while, and the products we are testing here could be used in such a configuration. But here we are testing them in the full soundbar-surrounds-and-subwoofer configuration, that will hopefully provide the most immersive sound in the most compact set-up.

Yamaha's True X, JBL's Bar 1300 and Samsung's flagship Q990D are our pick of such systems, and each will certainly deliver on immersive movie night audio, with a comparatively compact footprint. Over the next few pages we will dig into the particulars of each, so you can decide which one is right for you. We have rigorously tested each of these systems using our go-to test movies to really put them through their paces sonically. At the end of the day, we want you to enjoy the best movie sound possible - and we're sure you will find something here to suit.

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whf.cm/Yamaha\_TrueX

# Yamaha True X

## An enjoyable, energetic sound from a small package

**D**olby Atmos-compatible 'soundbar plus subwoofer' packages are not uncommon and present a great way to improve the sound of your favourite shows, movies and games. But despite increasingly clever virtual surround processing, they can't produce sounds to the side and behind the seating position in the way a full surround system can. Now, though, bundles that also include a pair of surrounds with the bar and sub are becoming increasingly popular. The Yamaha True X soundbar can be bought on its own as the True X 40A (£540) or as a True X 50A bundle with a subwoofer (£799). It is also available as a surround package that includes a pair of WS-X1A wireless speakers for £1099, which is how we are testing the system.

For reference, some top standalone soundbars such as the Sennheiser Ambeo

You can buy the soundbar with just the subwoofer if you prefer

Soundbar Plus cost £1299, while the Sony HT-A7000 is priced at £1199. It's also worth considering the Sonos Beam Gen 2, which is available as part of an 'Immersive Set' that includes the Sub Mini and a pair of Era 100 speakers for a total of £1281.

### Smart-looking units

The soundbar here is an attractive unit, measuring just over 101cm in width. Its sleek, rounded surface is almost entirely covered in a subtle grey fabric, save for two small strips on the front and top of the bar. It's a nice, unreflective look that promises not to distract from what's on-screen.

On the top strip are basic controls such as power and volume buttons, while the strip on the front of the bar features LED indicators to show the selected source or volume level. While these strips look tidy, they are difficult to read from any reasonable distance. These indicators also show the volume level, but it only changes in multiples of five. Thankfully, you can instead use an app to control the soundbar.

There are two 46 x 66mm forward-firing racetrack drivers on the face of the bar. On top, there are two 52mm upward-firing, angled height drivers alongside a pair of 75mm ported bass drivers, placed towards the centre of the bar to help with low-end projection, especially if a subwoofer is not in play. The subwoofer measures just over 40cm in height and depth and contains a 16cm drive unit. It matches the style of the bar nicely, featuring a smart-looking grille adorned with a Yamaha logo, made of the same fabric found covering the soundbar.

Each surround speaker houses a 55mm full-range driver, alongside two passive radiators. They are rechargeable speakers, offering around 12 hours of playback from a full three-hour charge. Each speaker will set itself to 'Surround' mode when synced with the other components; however, they

can be switched to 'Solo' for use as standalone Bluetooth speakers.

The True X is designed to connect to your TV via HDMI eARC, but there is also a dedicated HDMI input so that a source device can be routed through the soundbar, up to 4K/60Hz. There's also an optical input, an ethernet port, and a USB port for firmware updates. Everything is easy to access and the cables are tidy.

Setting up the system is quick and easy. The subwoofer powers up when plugged into an active mains socket, while the bar and surround speakers feature power buttons for manual activation. Once everything is up and running, simply press the 'setup' button on the remote control and the separate components should quickly synchronise.

You can also use the remote to switch between the soundbar's four sound modes, which change the audio performance drastically. First up is stereo, which disengages the surround speakers, followed by Standard, which Yamaha describes as being clear, audible, and suited to a wide range of content, such as general TV programmes, dramas, and sports. The third preset is Movie, which Yamaha says adjusts the texture and volume of bass and tunes the surround and height channels to give a more expansive feeling of space. Finally, there is a Game mode, which isolates specific sounds and sonic elements so that they are easier to pinpoint directionally, which could be ideal if you are playing games that require positional awareness.

Movie mode is our preferred choice for movies, as it feels more spacious and natural than Standard mode, while for music, Stereo mode is generally more focused and punchier.

You can access a few other features via the remote, such as Clear Voice and Bass

**"The low, pounding pulse carries weight and tension without sounding overblown or detached"**



“There’s a nice sense of spatial movement as Kaa moves around the scene and hisses with a high-end sizzle”



Extension, which toggle on or off. Clear Voice makes speech louder, but it also adds a hard edge to the midrange so we prefer to leave it switched off. Bass Extension works well with the sub, adding a noticeable and pleasing boost to the low-end. However, when we switch it on using just the soundbar, the overall sound ends up too thick, so we prefer to disengage this when the sub is not connected.

As is often the case with soundbars, the app is the best way to take control of the system. The Yamaha Sound Bar Controller app that we use to control this system is simple to navigate and is generally easier to use than the remote on account of the soundbar’s difficult-to-read LED display. The app will tell you the exact volume of each component in the system, as well as whether settings such as Clear Voice are active. You can also use the app to play audio via streaming apps such as Spotify.

### Good spatial movement

We start off our testing with the opening scene from *Drive*. The low, pounding heartbeat-like pulse as The Driver navigates the city carries weight and tension without sounding overblown or completely detached from the rest of the audio. The subwoofer plays a vital part in this, and we find it best to position the sub as close to the soundbar as possible to help integrate the overall sound.

We switch over to 2016’s live-action adaptation of *The Jungle Book*, where several scenes are great for testing detail and spatial movement. The snake Kaa’s voice contains several layers, some adding a serpentine hiss. The surround speakers give a nice sense of spatial movement to these layers as Kaa moves around the scene and hisses

The speakers are attractively wrapped in a subtle grey fabric

with a high-end sizzle that adds a genuine eeriness.

Despite being small units, the surround speakers manage to match the timbre and character of the soundbar, so when audio moves around the scene, it doesn’t noticeably shift in tone. It does lose some composure when the volume is increased, but this is rarely an issue when the speakers are used as surrounds. Using one of the surrounds as a Bluetooth speaker sounds good for a small unit, offering decent levels of energy and insight.

However, we suspect most people will primarily use them as surrounds, and because they are small and rechargeable, they are easier to place than some alternatives and offer the flexibility of positioning that other mains-operated units don’t. If positioned with care, they help create a seamless soundfield and merge well with the soundbar at the front.

While the surrounds add an impressive sense of horizontal space, they fall short in projecting height. Scenes with planes flying overhead sound as if the aircraft are on a level with our seating position, rather than overhead as they should.

However, the system provides good levels of detail and texture. Sticking with *The Jungle Book*, we can hear the crunches of twigs and leaves beneath Mowgli’s feet

as he runs through the high tree branches, despite there being a fair amount of other audio playing simultaneously. The system manages to separate different sonic elements clearly and concisely, giving us insight into what is going on across the frequency spectrum, whereas some rivals such as the Samsung Q990D don’t convey high-frequency information quite as well. The Yamaha system doesn’t quite match the Samsung when it comes to richness and weight of audio, although the leaner sound produced does mean this system is better suited for smaller rooms and spaces.

With music, the package sounds lively, dynamic and full. Stereo mode disengages the surrounds and presents the audio in its intended format, which suits some recordings or genres better, though listening in Movie mode gives a fun 3D audio experience. Kelela’s vocal performance that kicks off her track *Frontline* has power and richness, while the joining instrumentation highlights the system’s dynamic capabilities, with decent levels of expression on show.

The components in Yamaha’s True X soundbar system combine well to create a cohesive and enveloping soundfield, sounding exciting and detailed with both movies and music. There are beefier packages available, but for smaller spaces and the price, this combination offers a satisfying listening experience.

## WHAT HI-FI?

RATING ★★★★★

### SOUND



### BUILD



### FEATURES



### FOR

- Well-built
- Agile, fast sound
- Well integrated sub

### AGAINST

- Lacks the sonic height usually associated with Dolby Atmos
- Presentation could have more scale

### VERDICT

The Yamaha True X provides a pleasing mix of insight and agility wrapped in a neat, well-made package

View online review  
whf.cm/JBL\_Bar\_1300

# JBL Bar 1300



## JBL's flagship soundbar has detachable surrounds and delivers energetic and immersive sound

**A** soundbar package is a great option if you want serious movie sound but don't want the fuss and expense of a full home cinema system. Comparatively simple, sleek and affordable, such packages usually consist of a bar, a subwoofer and two wireless surround speakers. The super-flexible approach of the JBL Bar 1300 sees the ends of the soundbar detaching to become the surround (or even standalone Bluetooth) speakers.

The Bar 1300 measures just under 140cm in width with the rear speakers attached on either end – that's a lot of bar; wider than most standalone soundbars. However, with the rear speakers detached, the main soundbar section measures just 100cm, around the same as the smaller Yamaha True X bar.

The main soundbar houses six 46 x 90mm racetrack drivers, five 20mm tweeters, and four 70mm upfiring full-range drivers. The rear speakers

The subwoofer is a solid unit with a downwards-firing 10in driver

feature three drivers of the same design as those included in the main bar, along with two rounded rectangle passive radiators. Having matching drivers across the different components should increase the potential for an even and seamless surround experience.

We find the configuration of the drivers in the rear speakers to be slightly curious, however. Of the three drivers, one is firing towards the listener, one is aiming upwards, and one is firing behind where the listener is seated. The lack of a driver firing along the side wall and back towards the soundbar has us wondering if this configuration might impact the system's sense of width. The subwoofer is a rounded cuboid shape and stands 44cm tall and around 31cm wide and deep, with four small feet and one downwards-firing 10in driver underneath. It's a solid unit that matches the look and feel of the accompanying bar and rears.

Everything in the system feels solid and well made, with the rear speakers magnetically attaching simply and securely to the main bar. The surrounds have a quoted 12-hour battery life, on par with similar rechargeable speakers. The customisable nature of the system is quite convenient; if the surrounds run out of battery or you would prefer to listen to them in unison with the main bar, reattaching them is quick and simple.

The Bar 1300 offers HDMI eARC and an optical audio output. You can also connect wirelessly to the whole system via wi-fi, or use Bluetooth to connect to just a standalone rear speaker. There are three additional HDMI inputs that can handle Dolby Vision and HDR10 signals, though, these sockets can't handle cutting-edge gaming features such as 4K/120Hz.

The soundbar features a simple three buttons on its surface, controlling volume

and input source. The rest of the system's controls can be adjusted using the JBL One app or included remote. JBL is so confident in its remote design that the app features a visualiser displaying a virtual version of the remote on your screen. The app includes a few optional extras, such as a three-band equaliser and an audio sync control. Overall, the bar is quite light on features and instead focuses on offering a simple, streamlined experience. There are no sound modes to choose from, and no commonly found optional extras such as voice enhancement or a night mode.

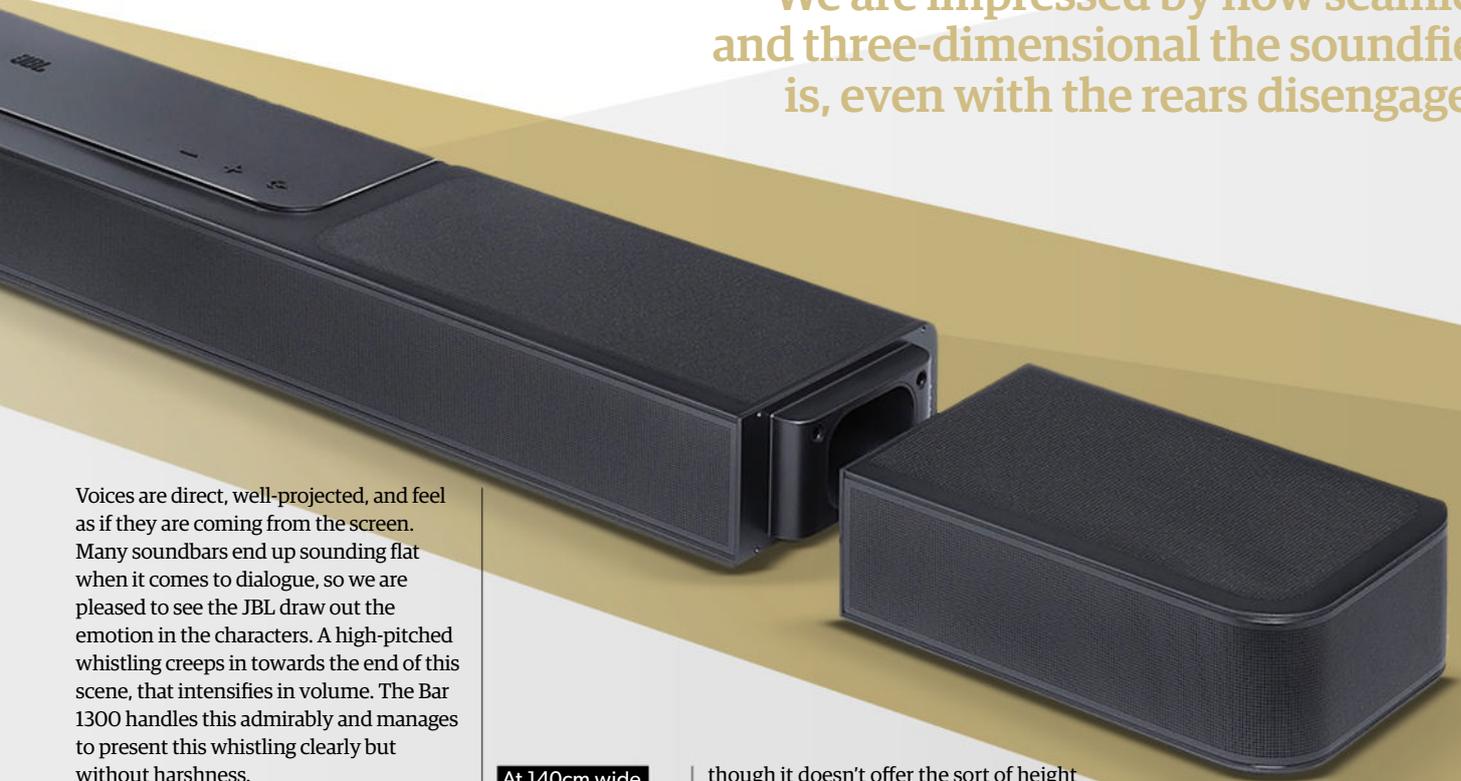
Setting up the system is quick, and involves a few optional but recommendable steps, such as connecting to wi-fi and two-step room calibration. Completing both steps takes only a few minutes. For extra fine-tuning, the remote and app include controls for separately adjusting the levels of the subwoofer, rear speakers and Dolby Atmos channels between a value of one and five, though we only really use the levels in the middle as either end of the scale is too extreme. Via the app, the Bar 1300 supports Spotify Connect, Tidal, Qobuz, Amazon Music, Napster and a range of internet radio stations. There's also AirPlay 2, Chromecast support and Amazon Alexa voice control.

We start things off with *Blade Runner 2049*, which features a number of scenes that will test any system's capabilities in several different ways. One scene involves the main protagonist answering questions from an authoritative voice coming from behind a screen/camera. The exchange increases with intensity, and the JBL conveys the speech clearly and excitingly.

**"The system does well with textures and incidental sounds that give scenes their atmosphere and subtlety"**



“We are impressed by how seamless and three-dimensional the soundfield is, even with the rears disengaged”



Voices are direct, well-projected, and feel as if they are coming from the screen. Many soundbars end up sounding flat when it comes to dialogue, so we are pleased to see the JBL draw out the emotion in the characters. A high-pitched whistling creeps in towards the end of this scene, that intensifies in volume. The Bar 1300 handles this admirably and manages to present this whistling clearly but without harshness.

### Atmosphere and subtlety

The system does well with textures and incidental sounds that give scenes their atmosphere and subtlety. A tap on the shoulder or the crinkle of a leather jacket is audible even during busier action-filled moments where there is a lot of sonic information to be processed.

We generally listen to the system with its volume set to around 20, the kind of level that is loud enough for action to feel cinematic but that shouldn't upset the neighbours. As we turn up the volume past 20, however, we notice a slight drop in the system's composure. Consonant and emphasised words and sounds become more abrasive and, as a result, there is a slight loss of clarity in dialogue. It shouldn't be a huge problem in most applications, but is something to be aware of if you like your movies very loud.

Considering the configuration of each rear speaker, which does not include a side-firing driver facing towards the screen, we are impressed by how seamless and three-dimensional the soundfield is. Even with the rear speakers disengaged, the bar is very capable of projecting audio with a sense of spaciousness.

During another *Blade Runner* scene, aircraft fly overhead and percussive elements are panned across the room. The sense of horizontal width and space delivered by the JBL is impressive,

At 140cm wide with the surrounds attached, it's a lot of soundbar

though it doesn't offer the sort of height that other Atmos soundbars can muster. All of the Bar 1300's sound seems to be delivered in a band stretching roughly from your knees to your head – though its placement of effects within that band is very accomplished.

The subwoofer integrates with the soundbar well, with no unpleasant separation between low-mid and bass frequencies. It can go loud, thanks to its dedicated five-step volume control, but we find any level above three is usually overkill while turning down below two makes it feel as though the sub is off. While the sub is present and fills out the sound, it isn't the most precise and can struggle with defined separation when tasked with handling multiple deep rhythmic elements, such as the booming drums at the start of *Blade Runner 2049*.

Pulling up a few albums via Spotify Connect, we give the system a spin with the rear speakers muted. Without any sound modes to choose from, this is the

equivalent of selecting a 'stereo mode'. The Internet's 2015 album *Ego Death* is choc-full of bass-heavy, fairly stripped-back tracks. The JBL handles these songs well with everything sounding punchy and lively. The sub isn't quite as tuneful as the one included with the Samsung Q990D, but it's still a commendable performer.

The JBL Bar 1300 offers an interesting alternative to other soundbar systems, providing a flexible solution to a range of possible set-ups. It doesn't include many features or settings, and there are systems with more rhythmically precise subwoofers. Its lack of height compared with some rivals might also bother those who are desperate to hear those planes flying overhead. All told, though, if you are looking for a streamlined package that presents audio in a bold and up-front manner across a seamless soundfield, this JBL is worth checking out.

## WHAT HI-FI?

RATING ★★★★★

### SOUND



### BUILD



### FEATURES



### FOR

- Bold, up-front sound
- Wide, seamless soundfield
- Adaptable wireless rear speakers

### AGAINST

- Vertical projection of sound is limited
- Limited feature set
- Subwoofer could be more precise

### VERDICT

A versatile system that could suit a range of uses, and sounds bold and lively without becoming harsh

View online review  
whf.cm/Q990D

# Samsung Q990D

## This soundbar system delivers Atmos in very impressive fashion

£1699



**A**t the risk of pointing out the blooming obvious, Samsung sells a lot of TVs. And, while we have no actual evidence, we predict that it absolutely hates it when people combine those TVs with soundbars from other brands.

That's why it is so determined to make its own market-leading soundbars. It has been getting steadily closer to that lofty ambition, with last year's Q990C falling just a whisker short of a five-star verdict.

This full system comprises a soundbar, wireless sub and two wireless surround speakers, with a huge 11.1.4 total channel count. Even though it's clearly a premium proposition, for a full system with the sort of feature set that it has, the Q990D actually looks like pretty good value.

The angular, monolithic design of the bar and satellites is starting to look a bit dated, but there are plenty of sensible design elements, such as the fairly non-reflective finish and 7cm height of the bar which means it doesn't obstruct a typical TV. Simple brackets for wall mounting the bar are also included. Interestingly, the subwoofer features a smoother and slightly softer-looking design, which seems sensible given its large dimensions of 41 x 22 x 41cm.

There are 22 drivers in total, with the bar itself featuring six forward-firing elliptical midrange drivers and three tweeters, four side-firing drivers and two up-firers. Each surround features one forward-, one side- and one up-firing driver, and the sub has a 20cm driver hidden behind a smart plastic plate. Samsung recommends the

surrounds be placed behind the listening position at a 135-150 degree angle, though the system will of course compensate if you have to put them more to the sides.

The Q990D features Samsung's SpaceFit automatic calibration, which uses the mic built into the soundbar itself and is constantly running whenever the SpaceFit setting is selected - there's no messing about with test tones or external mics.

There are four main audio presets: Standard (designed to reproduce the 'original sound'), Surround (aims to deliver a 'wider soundfield'), Game Pro ('provides stereoscopic sound to immerse you in the action') and Adaptive Sound ('analyses the content in real-time and automatically provides the optimal soundfield based on the characteristics of the content').

In Standard mode, the system will output sound using the number of channels in the original signal, so 2.0, 5.1, 7.1 or 7.1.4. That means it will never use the full 11.1.4 channels. Surround, Game Pro and Adaptive all up-mix all signals to 11.1.4.

The 41 x 22 x 41cm sub has a softer, more rounded design



Dolby Atmos and DTS:X are supported (as well as the surround versions of both).

Additional toggleable modes include Active Voice Amplifier ('analyses external noise in real-time while the soundbar is playing, so voice audio can always be heard clearly'), Voice Enhancement, Bass Enhancement, Night Mode and Virtual. Night Mode reduces bass and dynamics and can be useful for late-night viewing.

The main feature improvement for the Q990D is the HDMI's, which have been upgraded to 2.1-spec, with full support for advanced gaming features. The bar will pass through Dolby Vision signals as well as HLG, HDR10 and HDR10+. There are many soundbars that have no HDMI inputs at all, with just a single HDMI eARC port for connection to a TV. The fact that the Q990D has two HDMI inputs will be a huge bonus to many, particularly those who own a TV with limited HDMI 2.1 sockets.

The Q990D also has an optical input, but perhaps more useful will be the various wireless connections, which include Chromecast, Spotify Connect and Bluetooth. You can even connect the soundbar to a Samsung TV using wi-fi if you wish, though we don't see why you wouldn't use an HDMI cable when the devices are so close together.

There are a couple of other advantages to owning both the Q990D and a Samsung TV, too. First is the general interoperability, with soundbar settings appearing in the TV's menus. Second is Q Symphony, which allows the Q990D and TV speakers to work together to create an even wider soundstage. How well this works will depend on the specific Samsung model you own, so we recommend trying it and seeing if you enjoy the effect.

### Striking atmospherics

In our room, SpaceFit works well. It brings the surrounds into play more, raising them to a level closer to the soundbar at the front and making surround atmospherics more striking, which most people will

“The Q990D fills the room with sound and places effects in three-dimensional space with impressive precision”

**WHAT HI-FI?**  
★★★★★



appreciate. However, if you find them occasionally distracting, turning SpaceFit off makes for a more subtle but still engaging surround experience.

For movies, our preferred processing mode is Surround, but it's a close call between this and Adaptive. The latter is slightly more forthright in a way that's very exciting, but it also occasionally seems to slightly exaggerate certain effects, such as the slight echo to a couple of lines of dialogue in *Unbroken*, in a way that sounds a little unnatural. These occasions are rare, though, and we expect many people will be delighted with what Adaptive does.

Surround mode is a touch softer than Adaptive, but still delivers a very lively presentation that ensures there's oodles of excitement to action scenes. The flack in *Unbroken* explodes with punchy precision and there's lots of bassy meat following each initial impact. Bullets ricochet off the bomber's metal with crisp definition too.

### Impressive precision

The Q990D does a superb job of delivering Atmos, filling the room with sound and placing effects in three-dimensional space with impressive precision. It's not only that planes sweep across, above and behind the listening position, impressive though that is, but the varied distance from you that effects appear in - some very close to your ear and others across the room. Most people think of height with Atmos, and the Q990D certainly delivers that, but it's this 3D audio effect that Atmos is really about.

Chapter two of *Blade Runner 2049* is the downfall of many a speaker system, with the near subsonic bass proving a test too far for most. The Q990D doesn't pass the test with flying colours, but it does better

The system features 22 drivers, 15 of which are in the soundbar itself

than most. So while there is a hint of crackle from the subwoofer and the rear speakers, it's quickly controlled and there is none of the sustained chuffing with which many products suffer. And while the subwoofer isn't terribly tonally flexible, it does keep up with the general rhythm of the bassline and thus lends the necessary foreboding to the dramatic build-up.

The Q990D is an impressively dynamic performer overall, particularly in terms of those big shifts in volume. It's pretty good at low-level dynamics, too. There are rivals that are a little more subtle and nuanced, but the Q990D is still perfectly capable of conveying the emotion in lines of dialogue. Dialogue is always clear, too, even when the presentation is packed with other sounds. The system does a good job of picking out fine details here, too, such as the mechanical whirring of a gun emplacement in *Unbroken* and the rain on the glass of K's car in *Blade Runner 2049*.

Compared with its predecessor the Q990C, the Q990D has more bite and

punch, and also more low-level dynamic subtlety, which is particularly noticeable in voices. The bass is also more present, but at the same time more seamlessly integrated - so while it adds more weight to effects, they also sound more natural. This improved tonal cohesion combines with improved spatial cohesion (the surrounds integrate with the bar even better this time) to make for an overall improvement to the immersion of the presentation.

The step up from the Q990C to the Q990D isn't huge, but a number of small refinements mean that this new model crosses into five-star territory. It's a hugely compelling package overall, and while it's certainly not cheap, it is good value compared with alternative systems that offer similar specification and features.

If you want something approaching 'proper' Atmos sound without buying an AV amplifier and 12 individual speakers, it has to be on your shortlist.

**WHAT HI-FI?**

**RATING** ★★★★★

#### SOUND

★★★★★

#### BUILD

★★★★☆

#### FEATURES

★★★★★

#### FOR

- Large, immersive and three-dimensional sound
- Dynamic, weighty and detailed
- 2x HDMI 2.1 inputs

#### AGAINST

- Very occasional bassy crackle
- Hard to read display

#### VERDICT

The Q990D delivers Atmos (and DTS:X) in a way that very few soundbar packages can match

# System of the month

A superb set-up that will bring you equal joy whether playing games or watching movies



## The system

- **TV** LG OLED65C4 £2699
- **AV amplifier**  
Sony TA-AN1000 £799
- **Speaker package**  
Wharfedale Diamond 12.1 HCP £999
- **Blu-ray player**  
Panasonic BDP UB450 £199
- **Games console**  
Xbox Series X £479

**TOTAL PRICE** £5175



Image: Our Living World, Netflix



When you refresh a product range each and every year, as pretty much all television manufacturers have for the past decade and more, it is quite difficult to make massive improvements from one iteration to the next. Which is why we weren't massively surprised, when we reviewed LG's C3 range of TVs in 2023, that they didn't take things on greatly from the impressive C2 model that preceded it. Disappointed, perhaps; but not surprised.

This year, though, with the introduction of 2024's C4, things have moved on considerably - so much so that the range is right back up at the top of the OLED tree.

The most obvious improvements are to brightness and picture sharpness, which take things on to a whole new level, without making the image too garish and unrealistic. Sound quality has also improved - but it's the picture in all its glory that merits the C4's place in this set-up. And that's not only when streaming or playing a 4K Blu-ray. This LG is also a belter to play next-gen games on. It sports four HDMI 2.1 sockets with support for all the important gaming features. And the general picture improvements make a noticeable difference to take it a step above its predecessor when playing *Call Of Duty* or *EA Sports FC 24*.

All of which makes the LG OLED65C4 absolutely ideal as the starting point for a superb home cinema and gaming set-up, such as the one we have put together here. We marry the excellent TV with a belting surround-sound system, a capable 4K Blu-ray player and a next-gen games console to do the picture capabilities of this fine TV proud.

The sound in a home cinema system is as important as a great picture. A weedy soundtrack with hard to discern voices will ruin the magic of a movie night just as easily as a blurry, smeary image would. To that end, we give our surround-sound sonic duties to a truly dynamic duo: Sony's TA-AN1000 multi-channel amplifier and Wharfedale's fine Diamond 12.1 Home Cinema Package. Award winners both in our 2023 cohort, these two provide outstanding sonic performance for the money - easily outperforming what their £1800 outlay might suggest.

The Sony amplifier is astonishingly accomplished for the money, with a powerful, dynamic performance that can deal with anything a movie's sound engineer could possibly want to throw at it. Importantly there is a precision and clarity to dialogue that means even the most distracting of background sounds won't disguise what the character is saying. All those background 'distractions' however are also



presented with pin-point accuracy and power, meaning this is an all-round powerhouse talent.

And it pairs beautifully with the Wharfedale speaker package. A 2023 Best Buy package, the 12.1 HCP comprises four 12.1 standmount speakers, 12.C centre channel and SW10 subwoofer providing low-end oomph. The Sony amp can accommodate another couple of speakers in either a 7.1 surround set-up or a 5.1.2 Dolby Atmos configuration, so you can add to the system later should you wish to upgrade.

As it is, this fantastic little package brings a rich and lively sound that still manages to stay firmly in control of things and retains an entertaining immersion and precision. Importantly, and in contrast to a number of potential rivals, the centre speaker and the subwoofer integrate their sound beautifully with the four little 12.1 standmounts. That means the Sony amp can do its thing without there being any obvious glitch in the sonic matrix when the sound pans from one side of the room to another. It's all very immersive.

As we say in the verdict of our full review of the Wharfedale package: "With poise, effortlessness, cut glass diction and charisma, the Wharfedale Diamond 12.1 HCP is essentially the Audrey Hepburn of home theatre speaker packages. It offers rich bass without sacrificing or overpowering the mid and treble, presenting a mature sound that's rich in impact, agility, detail and sensitivity."

## BOLD, DRAMATIC PICTURE

While the LG C4 comes with pretty much all the streaming options you could want, it is still our belief here at *What Hi-Fi?* that the very best in 4K pictures come from physical software. You simply can't beat a 4K Blu-ray for the very pinnacle of peak picture performance.

The Panasonic Blu-ray player has the crucial advantage over its cheaper 150 sibling in that it can handle Dolby Vision HDR as well as HDR10+ and HLG. There are better-performing units out there, but they will set you back more of your hard-earned - and that wouldn't be appropriate for the rest of this fine system; which, while being excellent, can of course be bested if you are willing to chuck money at it with abandon. We aren't going down that route here.

The Panasonic gives a bold, dramatic picture with instant appeal - yet enough subtlety and definition to provide a nice sense of texture. It certainly allows the LG OLED to shine in the way only a Blu-ray can really provide.

The final piece of our mid-range home cinema comes in the form of the Xbox Series X. Clearly either the Xbox or the Playstation 5 would perform equally well here. Either one will provide a stunning 4K gaming experience in this set-up. Which one you choose is really down to console-exclusives or brand loyalty. Otherwise, there isn't really a wrong choice.

The next-gen games console rounds out a stunning home cinema and entertainment set-up that will be an absolute delight for a few years to come.

# TEMPTATIONS

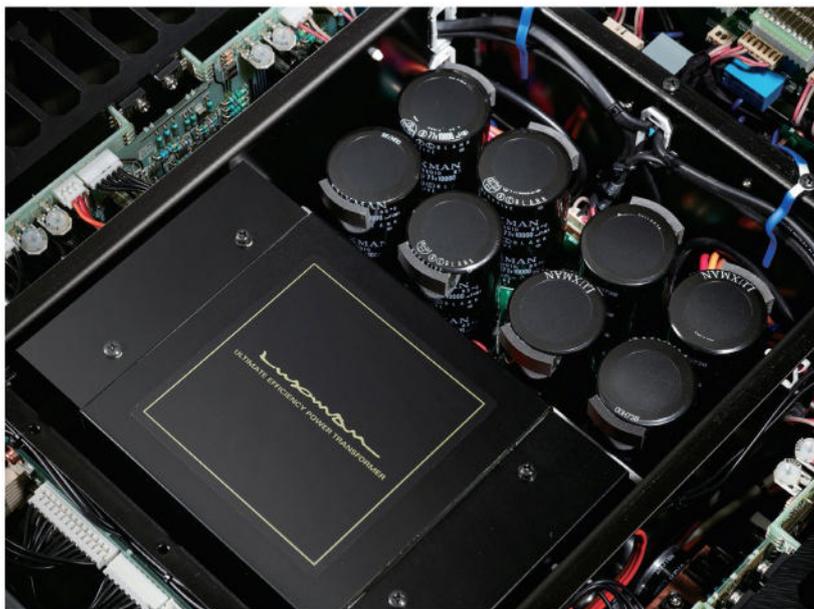
EXPENSIVE, YES. BUT YOU KNOW YOU WANT THEM

# Luxman L-509Z

**WHAT HI-FI?**  
★★★★★

- Integrated amplifier
- £10,999
- ★★★★★





If you are looking for a minimalist all-analogue amplifier, you may need to look elsewhere

**In the world of analogue hi-fi, simplicity has long been king.** Conventional wisdom has it that fewer features mean a purer signal path with the bonus that more of the build budget can be allocated to sound-critical components rather than paying for extras that may or may not be used. In our experience, such a purist approach does indeed tend to lead to better-sounding products; but then again, there are exceptions - such as Luxman's L-509Z.

On paper, this classy integrated is about as far from the minimalist ideal as an all-analogue amplifier can get. You have a built-in switchable phono stage, tone, loudness and balance controls, the ability to switch between two pairs of speakers and a choice of headphone outputs. It is also possible to separate the pre and power sections and use them individually should you want to upgrade. The unusual thing is that the L-509Z offers all this while still delivering sound quality that rivals the very best minimalist designs at the price.

#### WHAT HI-FI?

##### SOUND



##### BUILD



##### FEATURES



#### FOR

- Strikingly clean and detailed presentation
- Plenty of power
- Packed with features
- Exceptionally well made

#### AGAINST

- Needs care in system matching
- Plastic battery cover

#### VERDICT

Luxman's L-509Z is a superb all-round package; it proves that a comprehensive feature list and great sound are not mutually exclusive

### TOP-CLASS ENGINEERING

Luxman's engineers have managed this with top-class engineering and by paying obsessive attention to the details. It starts with a stiff, highly regulated power supply that uses a hefty 600VA mains transformer and a generous 80,000uF of smoothing capacitance. And it continues with separate preamplifier and power-amplifier circuitry, packed full of high-quality components. Each section operates with an unusual form of negative feedback that is claimed to deliver low distortion and a more natural sound.

A great deal of work has been done on the L-509Z's volume control. This switches through a series of precision resistors to ensure transparency and consistency in balance, even at the lower extreme of its 88-level steps. The signal path is carefully designed to be as direct as possible to minimise signal degradation and the circuit boards are of the peel-coat type to reduce dielectric effects. This attention to detail extends to luxurious speaker terminals, good quality OFC internal wiring and a complement of unusually sturdy copper-alloy input connectors.

It is fair to say that the L-509Z is something of a powerhouse. It is claimed to deliver 120 watts per channel into an 8-ohm load and that rises strongly to 220 watts per side as impedance halves. That close to doubling of output is pretty unusual, particularly in integrated designs, and strongly suggests that this amplifier will have no issue driving difficult

"To our eyes, the amp looks appealing in a retro way, and there is plenty to admire in its design and build"

speaker loads. We certainly didn't have any issues with the range of speakers we tried during the testing process.

When it comes to general build and quality of finish, this integrated is up with the best we have seen. The casework is reassuringly solid and finished to an exceptional standard. We love the crisp machining around the ventilation holes on the top panel and the way every control works with precision. There is no lost motion or even a slight wobble in any of the control dials, and the intuitive way the digital volume level display responds to the movement of the volume control is a joy. Whoever worked on the software to do that needs a pay rise. The VU meters? We have doubts as to their usefulness, but who with even a trace of affection for hi-fi products doesn't like them anyway? Those who like to listen in the dark can turn off the illumination behind the meters if they find it distracting.

The amplifier's mostly metal remote handset is sensibly sized and simply laid out. It works well and we have no issues with operating angles. However, in a rare misstep, Luxman spoiled things a bit by making the battery cover out of plastic and in a shade that is different from the metal body. It is the only part of this amplifier that looks anything less than exemplary.

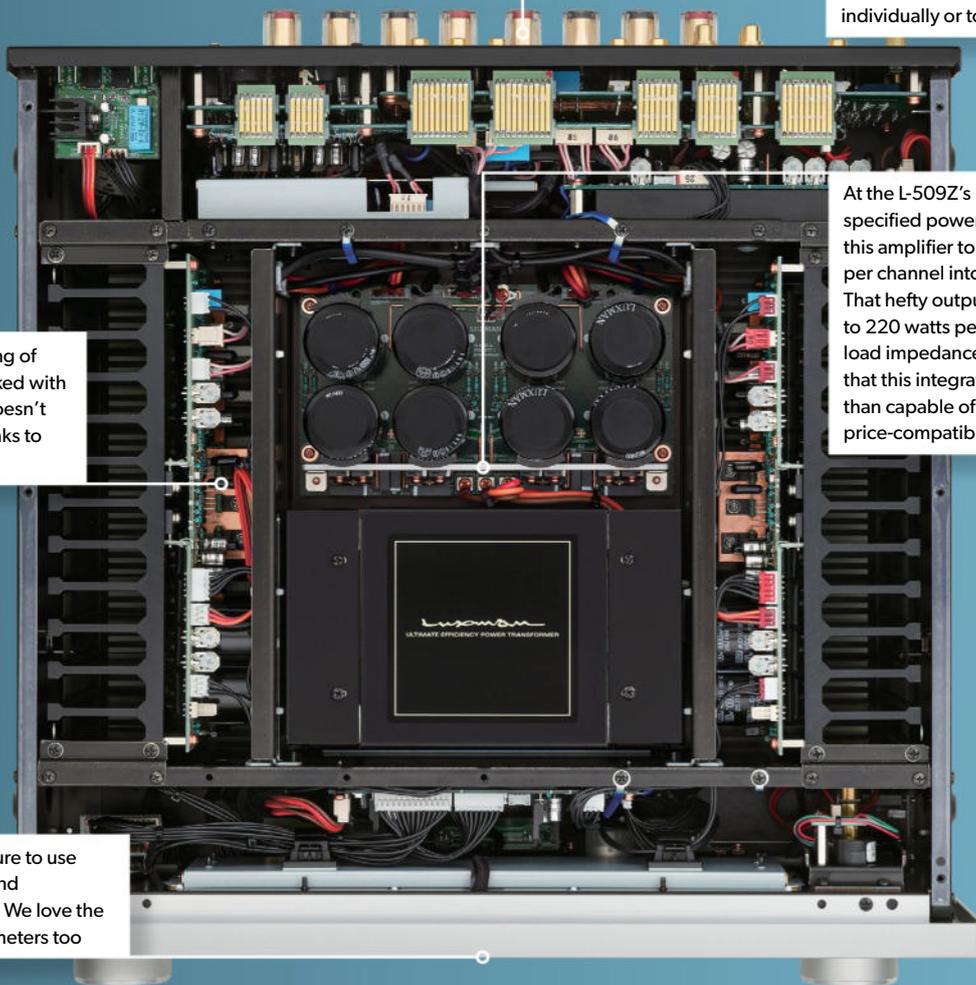
We have no issue with connectivity. It is generally excellent with six line-level inputs, including a pair of balanced XLRs. The L-509Z's phono stage is unusually adaptable, offering easy switching between moving magnet and two moving-coil options. These can be set to accommodate both high and low-output MC cartridges. In use, it has enough gain to cope with most price-comparable cartridges, and goes about its business in a refreshingly quiet and hum-free way. This amplifier can be connected to two pairs of speakers and switched so that it can drive either or both with just a turn of the front-panel control dial. Nice.

### CRISPER AND PUNCHIER

We are pleased to find that Luxman has specified a headphone output too. Here, once again, there has been serious thought put in to the feature by including not only the standard 6.3mm option but also the increasingly popular balanced 4.4mm alternative. In our experience, if your headphones offer the choice of balanced operation it usually leads to a slightly crisper and punchier performance. We are glad Luxman took the extra step.

Would we have liked digital inputs? The lack of them could certainly be considered a miss, though at this level we suspect that any price and quality-appropriate source is likely to contain more talented DAC circuitry than Luxman could implement here. There is also the danger that any electrical noise generated by such a circuit could well cause unwanted interactions, affecting the performance of the sensitive analogue parts of the amplifier. We have tested numerous high-end amplifiers with digital inputs and have

# IN DETAIL... Luxman L-509Z



Despite being something of a powerhouse and packed with circuitry, this Luxman doesn't run particularly hot thanks to efficient heatsinking

This amplifier is a pleasure to use thanks to well judged and precise-acting controls. We love the look of the front panel meters too

It is unusual to find a high-end amplifier capable of connecting to two pairs of speakers, but this Luxman can. You can use either pair individually or together

At the L-509Z's heart is a generously specified power supply that allows this amplifier to deliver 120 watts per channel into an 8 ohm load. That hefty output almost doubles to 220 watts per channel as the load impedance halves, meaning that this integrated is more than capable of driving any price-compatible speaker

“There is plenty of information: the starkly differing instrumental textures and the dynamic nuances that help to build the tension throughout the piece”

usually felt that their performance with digital signals falls behind even relatively modest outboard DACs such as the Chord Qutest. It seems that integration has its limits.

The ability to adjust the tonal balance is fairly rare in high-end amplification. While it is true that such controls can affect the phase of the music signal and overall transparency, if implemented with care those effects shouldn't be too obvious. Then, such controls can prove surprisingly useful to tame an aggressive recording or add a bit of body to a thin one.

The L-509Z takes a slightly unusual approach by offering a midrange adjustment alongside the usual bass and treble options. These controls work in a relatively subtle way, which makes them more useful than most. There is also a

loudness switch that boosts both frequency extremes to prevent the sound from becoming a bit flat at low volume levels. This is another feature that has fallen out of favour in recent decades, but we find that it proves handy on the odd occasion. Purists will be happy to know all these tonal adjustment features can be bypassed at the press of the 'Line Straight' button. Despite the care taken in implementing them, we can hear small but notable increases in clarity and definition when doing so. Your system will need to be suitably transparent to notice these improvements, though.

### PRECISION, CLARITY AND BALANCE

Any amplifier at this level deserves quality sources and equally talented speakers. We feed the L-509Z with our reference sources, the Naim ND555/555 PS DR music streamer and Technics SL-1000R turntable. Since this amplifier is compatible with both moving magnet and moving coil cartridges we try both the Vertere Dark Sabre MM and Kiseki Purpleheart MC. As for speakers, the bulk of our testing is done with ATC's SCM 50 but we also connect the Epos ES14N and Wilson Benesch Discovery 3Zero to hear how the Luxman responds.

If we were to sum up the Luxman's sonic presentation in just a few words they would be precision, clarity and balance. This is a sophisticated sounding performer that's as insightful and refined as they come. Listen to a dense piece of music



remarkably civilised-sounding product that still manages to capture the drama and excitement of the music it is asked to reproduce. That blend of refinement and enthusiasm isn't as common as you might expect to find in high-end hi-fi.

We are pleased to report that the amplifier remains as accomplished when we try it with records. The Luxman's built-in phono stage retains the general balance and character of the line stages whether we use Vertere's Dark Sabre moving magnet or the Kiseki Purpleheart moving coil. Sure, in absolute terms there is a mild drop-off of outright transparency, particularly with the moving-coil input, but it is important to note that this amplifier still manages to deliver enjoyable results whether we play Beethoven's *6th Symphony* or Michael Jackson's *Bad* set. If vinyl replay is your main source then we would say

'Line straight' bypasses tonal adjustments - one for the purists

such as Arvo Pärt's *Cantus In Memoriam Benjamin Britten* and the Luxman presents it as if served on a platter, making it easy for the listener to dip into individual instrumental strands or take a step back and enjoy the piece as a whole. There is plenty of information: the starkly differing instrumental textures, the acoustic clues that help the listener identify the size and scale of the recording venue and the dynamic nuances that help to build the tension throughout the piece. The L-509Z reveals all these insights and then uses them to build a convincing rendition that places our attention on the music rather than the mechanics of the hi-fi that is reproducing it.

Tonally, the presentation is even and balanced. Compared with similarly priced class rivals such as the Moon 641 or McIntosh MA8950 it is possible to point to a slight lack of richness and body to the Luxman's sound, but as long as the partnering system is chosen with care - and at this level it certainly should be - there shouldn't be an issue. Don't forget, there are those tone controls to help too. The upside to the Luxman's presentation is that it sounds pleasingly agile and articulate.

### LARGE-SCALE PRESENTATION

The L-509Z's soundstage is wide, deep and stable. It is capable of locking instruments and sounds in place even when the music becomes demanding. That generous power output figure translates into a large-scale presentation and the ability to swing dynamic shifts from quiet to loud and back again with grace and composure. There is an ease and control about this integrated's sound that is admirable.

But can it dance, you ask? We find out by playing Major Lazer's *Pon De Floor*. We are not sure whether this recording is considered essential listening at Luxman Headquarters, but it is great at showing off the integrated's speed and attack. Bass is taut, tuneful and delivered with considerable authority. The composure we noted with the Arvo Pärt piece is apparent here, with the L-509Z refusing to sound flustered even at high volume levels. This is a

look into buying a dedicated outboard phono stage, but it would have to be at least of the level of Vertere's excellent Phono-1 to be worthwhile. If, however, playing records is an occasional treat, then the phono module in the Luxman is good enough to cope with that.

It is good news as regards the headphone output too. We try out a range of headphones from Yamaha's terrific YH-5000SE and Sony's MDR-Z1R (with both 6.3mm and 4.4 balanced cables) to Grado's characterful RS1x and the Luxman responds with its customary clarity and insight. The choice of headphones has far more influence on the tonality and character of the sound than this benign-sounding amplifier does, and that is how it should be. The headphone amplifier module has enough grunt to deliver high volume levels with any of the trio of headphones and always sounds in control. The enviable composure we hear through the speaker outputs is notable here too.

What we have here is a high-end integrated amplifier that ticks all the boxes. To our eyes, it looks appealing in a retro way and there is plenty to admire in its design and build. After that, there is the sound quality that is as good as any alternative we have heard. If you are lucky enough to buy at this level, the Luxman L-509Z deserves a high place on your shortlist.

The L-590Z offers midrange adjustment as well as more usual bass and treble options



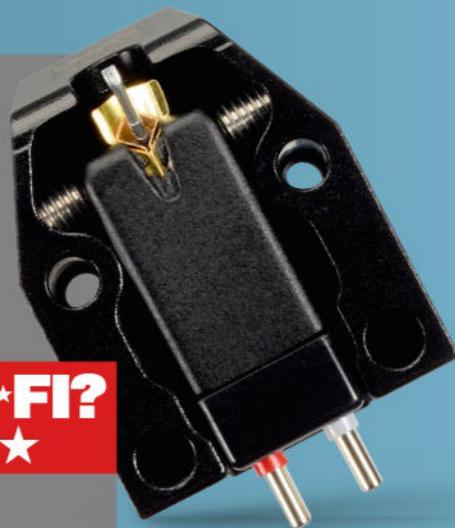
# TEMPTATIONS

EXPENSIVE, YES. BUT YOU  
KNOW YOU WANT THEM

# Vertere Dark Sabre

- Moving-magnet cartridge
- £1450
- ★★★★★

**WHAT HI\*FI?**  
★★★★★



“Move from the standard cartridge to the Dark Sabre and just about every aspect of the sound improves”

**Details matter** in audio design. Getting those details right makes the difference between good and great; and right now we can't think of a better example of this than Vertere's new Dark Sabre moving-magnet cartridge. We are big fans of the standard Sabre cartridge (£950). We reviewed it back in 2022 and it proved that moving-magnet cartridges could compete with the very best moving-coil options at its premium price.

The Dark Sabre pushes that price boundary even harder. Initially, we wondered whether Vertere had been blinded by ambition. After all, the two Sabre models share many basic ingredients including the generator, telescopic cantilever design and even body construction. But... details matter.

### DIFFERENCES AND SIMILARITIES

Those details start with the stylus tip, the bit that actually makes contact with the record groove. In the Dark Sabre this is a single-crystal micro-elliptical design that has been precision-cut to shape before being attached directly to the two-piece telescopic aluminium cantilever. In the standard Sabre, the elliptical diamond is bonded to a titanium shank before being punched through the cantilever. The Dark Sabre method is a more precise way of doing things and allows the tip to track the record groove more accurately.

This one change allows Vertere to tweak the cantilever angle and design slightly, and also fine-tune the angle of the generator. This slightly different generator position means that the rigid aluminium cartridge body can be machined into a subtly different shape, which in turn changes the distribution of its mass. All of these are small tweaks, but their cumulative effect is significant.

Elsewhere, things remain largely the same. Both cartridges feature a substantial cartridge body, and the two appear identical unless you place them side by side and notice the slight difference in some of the angles. This body is machined from a solid block of aluminium and then anodised, in the case of the Dark Sabre, black. There are three contact points on the top to ensure it makes rigid contact with the tonearm headshell. The cantilever remains an unusual design in that it is telescopic and is made of two types of aluminium to maximise stiffness without suffering from undue resonance.

The Dark Sabre is an easy cartridge to fit thanks to its straight-edged shape. It is quite heavy at 11.5g, but most tonearms should be able to cope. Once mounted to our reference Technics SL-1000R record player it tracks securely at the recommended 2.0g tracking weight, and sounds balanced enough so that we don't feel the need to tweak too much from there.

Vertere has provided small thumbscrews to secure the cartridge rather than the more conventional Allen bolts. That prevents over-tightening, and potentially any damage to the

body or fixing holes. The Dark Sabre's output is a fairly typical 4.3 mV (@1kHz, 5cm/sec) so there shouldn't be any issues when it comes to partnering with an MM phono section.

The rest of our set-up is our usual Cyrus Phono Signature/PSX-R2 phono stage, Burmester 088/911 MkIII amplifier and ATC SCM50 speakers. We also give the Dark Sabre's natural partner, the excellent Vertere Phono-1 phono stage a go to see how the pairing performs. There are no surprises; the all-Vertere combination works well together, though the cartridge proves unfussy, still delivering fine results when used with an out-of-house solution such as the Cyrus Phono Signature.

### THE KEY COMPARISON

We start with a comparison with the standard Sabre. We don't need long. The standard cartridge is as good an all-rounder as we have heard at its price, but if you have the extra budget - and your system is suitably revealing - we can't imagine anyone not picking the Dark Sabre given the choice.

Fundamentally, both cartridges share the same musically cohesive character. They are exciting, entertaining and subtle enough to work well with everything from a grand Beethoven symphony to something as bare-fisted as Nirvana's *Nevermind* set. Once set up with care, the tonal balances are nice and even, and they deliver enough in terms of stereo imaging and scale to satisfy.

However, move from the standard cartridge to the Dark Sabre and just about every aspect of the sound improves. As we listen to Beethoven's *Symphony No 9* we are aware that the newer cartridge digs up far more information from the record groove. It reveals more in terms of instrumental textures and defines the shape of notes with greater precision. There is more in the way of muscle too, as larger-scale dynamic shifts are rendered with more heft and confidence. We don't hear much difference in terms of outright scale, but the pricier cartridge certainly produces more in the way of authority and the ability to capture the sheer majesty of an orchestra in full flow.

Stereo imaging is good, the Dark Sabre's extra clarity making it even easier to place instruments in the soundstage. We have no issue with the stability of the imaging when the music gets demanding or the way either cartridge layers the instruments.

A switch to the aforementioned Nirvana album or Michael Jackson's *Thriller* set shows that the Dark Sabre also delivers more in the way of drive and attack. *Don't Stop Till You Get Enough* charges along full throttle with the cartridge handling the changes in musical momentum brilliantly. It digs up so much more detail yet still manages to organise it all in a musical and composed way. Despite resolving so much information, this is not a product that encourages the listener to concentrate on the production or recording techniques involved. Rather, it prefers that you simply sit back and enjoy the experience. A surefooted sense of rhythm and lows that exhibit plenty in the way of grip and power help that cause.

While it is possible to get some rather tasty moving coils at this level - the Lyra Delos and Ortofon Cadenza Blue come to mind - we think that the Vertere Dark Sabre is talented enough to stand tall against such competition. Also, let's not forget that its innately higher output means that it will be less demanding of the partnering phono stage. Phono stages with good moving-coil inputs don't come cheap. So, if you are looking to buy a cartridge at this level don't ignore the Dark Sabre. It is something of a gem.

#### WHAT HI-FI?

##### SOUND



##### BUILD



##### COMPATIBILITY



##### FOR

- Dynamic, punchy and entertaining sound
- Capable of impressive insight
- Easy to fit

##### AGAINST

- Up against some excellent moving-coil alternatives

##### VERDICT

Vertere proves that moving magnets are a viable choice, even at premium levels



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# BUYER'S GUIDE

The definitive guide to the best home-entertainment kit you can buy

From 75in 4K TVs to turntables, and from portable Bluetooth speakers to Dolby Atmos surround sound packages, here's where you will find the perfect hi-fi and AV product, fast.

## NEW ENTRIES THIS MONTH

Q Acoustics has wooed us with its clear, powerful and mature-sounding 5050 floorstanders. Talking of power, the feature-rich Denon AVC-X6800H further cements the brand's fine AV-amp pedigree; we said it is "akin to coming home to a mug of hot chocolate on a winter night". Then there is Samsung's stunning flagship QN900D TV, which proves that 8K tellies don't have to be fed 8K content to make a difference.

### Q Acoustics 5050, p89

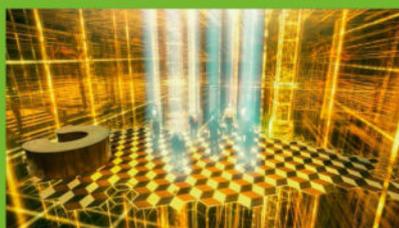
QA moves into more premium territory with this attractive pair of floorstanders. There is a change in sonic character too – the 5050s place more emphasis on dynamism and agility



<https://worldmags.net>

### Samsung QE65S95D, p103

Your bank balance may need to have the dimensions of the proverbial fatted calf for you to afford it, but this exceptional and elegant television makes a rock-solid case for 8K, even when there is little 8K content



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### HOW TO POSITION YOUR SPEAKERS

It's not just a case of 'plonk 'em down and plug 'em in'; getting your speakers set up properly can make all the difference to how they sound. We show you how to get it right on page 90.

### AMAZON PRIME VIDEO TIPS

Our guide to getting the most out of the popular streaming service, whether you're watching on a TV, tablet or smartphone. See page 111.



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NEW



## SONOS ACE Wireless Headphones £449

Experience a deeper connection to your music when you stream lossless audio over Bluetooth® or USB-C. Lose yourself in your listening experience with hyperrealistic spatial audio that surrounds you. World-class Active Noise Cancellation pinpoints and neutralises external sounds for maximum immersion. Sonos Ace is ready to go right out of the box. Connect to wired audio sources with the included USB-C and 3.5 mm audio cables.

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bluOS

## BLUESOUND NODE X

### Premium Wireless Hi-Res Music Streamer £549 | SAVE £150

To celebrate its ten-year milestone, Bluesound introduced the NODE X. This limited-time, 10th Anniversary Edition NODE X re-imagines some of the best parts of the NODE's product design, improving them even further, and sets a new standard for audio performance and usability in the category. Whether it is added to an existing audio system, amplifier, AVR or a pair of active loudspeakers, the NODE X is here to take 'just add streaming' into the next generation of audiophiles.

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Stereo amps up to £500

## Rega io £379

Best stereo amplifier under £400, Awards 2021 ★★★★★

Those who are happy with a no-fuss, purely analogue amp and who prioritise entertainment should arguably consider the io their number one choice.

**Power 30W Inputs** Line-in x2, MM **Outputs** Headphone



## NAD D 3020 V2 £399

September 2018 ★★★★★

A likeable effort that features a full-bodied sonic performance with fine timing and dynamics and lots of useful features.

**Power 30W Inputs** Line-in, MM, optical, coaxial, BT **Outputs** Headphone



## Marantz PM6007 £499

Best stereo amplifier under £500, Awards 2023 ★★★★★

Clearer and punchier than its Award-winning predecessor, Marantz's latest entry-level amplifier never puts the formidable 6000 Series dynasty in doubt.

**Power 45W Inputs** Line-in x4, MM, coax, optical **Outputs** 6.3mm h'phone



## Mission 778X £549

March 2024 ★★★★★

Make no mistake, this is a well-rounded product that deserves plenty of success. Retro appeal or not, the Mission 778X convinces.

**Power 45W Inputs** Line-in x2, MM, coax, optical **Outputs** Pre-out, 6.3mm



## Rega Brio £599

Best stereo amplifier £400-£700, Awards 2018 ★★★★★

An upgrade on the Brio-R, this incredibly talented stereo amplifier offers a sound that's subtle, precise and engaging.

**Power 50W Inputs** Line-in x4, MM **Outputs** 6.3mm headphone, record



## Arcam A5 £749

Best stereo amplifier £500-£1000, Awards 2023 ★★★★★

It has been years since we've heard such a convincing stereo amp from Arcam. Thinking of buying at this level? This one has to go at the top of your shortlist..

**Power 50W Inputs** Line-in, coax, optical, MM, BT **Outputs** Pre-out, h'phone



## Cambridge Audio CXA61 £750

Best stereo amplifier £500-£800, Awards 2022 ★★★★★

Justifies the price premium over the Audiolab 6000A and the Rega Brio by delivering a superior combination of sonic ability features and build quality.

**Power 60W Inputs** Line-in x4 **Outputs** Preamp, speaker x2, headphone



## Cambridge Audio CXA81 £999

Best stereo amplifier £800-£1500, Awards 2022 ★★★★★

Class leaders are constantly being replaced in hi-fi – but rarely is it done so soundly as by Cambridge Audio's CXA81 integrated amplifier.

**Power 80W Inputs** Line-in x4, XLR, USB **Outputs** Pre, sub, headphone



£500 to £1000

**Arcam A15 £1099**

**Best stereo amplifier £1000-£1500, Awards 2023 ★★★★★**

We worried a bit for the A15 when we heard how good the A5 was. But this is a clear step better than its sibling, delivering greater clarity, scale and precision.

**Power 80W Inputs** Line-in x3, MM, optical, coaxial x2 **Outputs** Pre-out H'phone



**Rega Elex Mk4 £1199**

**April 2023 ★★★★★**

Revealing and faithful, the new Elex is capable in ways far beyond our expectations at this mid-tier price point. It's a stunning amplifier.

**Power 72W Inputs** Line-in x4, MM, optical, coaxial **Outputs** Headphone



**Moon 240i £1990**

**Best stereo amplifier £1500-£2500, Awards 2018 ★★★★★**

A gorgeous piece of kit that puts in a stunningly revealing and dynamic performance. The Moon 240i is in a class of its own.

**Power 50W Inputs** Line-in x2, MM, optical x2, coaxial x2 **Outputs** 3.5mm



**Rega Elicit Mk5i £2000**

**October 2022 ★★★★★**

Just over 30 years on from the original, the Elicit integrated remains an excellent choice for those who prioritise sonic performance.

**Power 105W Inputs** Line-in x4, MM, opt, coax **Outputs** Preamp, headphone



**Naim Nait XS 3 £2199**

**Best stereo amplifier £1500-£3000, Awards 2023 ★★★★★**

A fit and forget product in the best sense, the Nait XS 3 slots into your system and does just what you want – delivers music with emotional impact intact.

**Power 70W Inputs** Line-in x4 **Outputs** Preamplifier, headphone



**Roksan Blak £2799**

**Best stereo amplifier £2500+, Awards 2018 ★★★★★**

A well equipped all-rounder with a powerful and energetic sound. It's happy to work with a wide range of systems and musical genres too.

**Power 150W Inputs** Balanced XLR, line-in x3, MM, USB, aptX Bluetooth



**Electrocompaniet ECI 80D £2899**

**June 2021 ★★★★★**

Electrocompaniet's entry-level integrated amp is a generously equipped and sophisticated-sounding performer.

**Power 2 x 80W Inputs** Line-in x2, coaxial x2, optical x3, MM, aptX B'Tooth



**Rega Aethos £3300**

**Best stereo amplifier over £3000, Awards 2023 ★★★★★**

The Aethos retains all the verve of Rega's established affordable integrations, but adds a huge dose of extra clarity, precision and muscle to the recipe.

**Power 125W Inputs** Line-in x5 **Outputs** Preamplifier, headphone



**Naim Supernait 3 £3499**

**Best stereo amplifier over £2500, Awards 2019 ★★★★★**

In adding a good-quality MM phono stage and tweaking the power amp section, Naim has made a great amplifier even better

**Power 80W Inputs** Line-in x5, MM, XLR **Outputs** Subwoofer, headphone



**Rotel Michi X3 £4700**

**June 2022 ★★★★★**

Add the exceptional build and comprehensive specifications to the hugely capable sonic performance and the Michi X3 is a must-have on your shortlist.

**Power 200W Inputs** Line-in x3, MM, XLR, coax, opt **Outputs** Preamp, h'phone



£1000 to £2500

£2500 to £5000

**Luxman L-509X £8500**

June 2018 ★★★★★

Much more than an expensive retro throwback; its blend of build, features and performance is hard to better at this price.  
**Power** 120W **Inputs** Line-in x6 **Outputs** Headphone, preamp



**Audio Research GSi75 £14,998**

April 2017 ★★★★★

This can stand toe to toe with the finest pre/power combos at this price; it's a well equipped one-box solution for high-end purists.  
**Power** 75W **Inputs** Line-in x3, MM, MC, USB **Outputs** Headphone



**Nagra Classic Pre/Power amp £29,000**

August 2018 ★★★★★

Rivals have more muscle, but once in full flow the Nagra lets the music take centre stage. One of the finest pre/powers money can buy.  
**Power** 100W **Inputs** Line-in x5, phono, XLR



CD PLAYERS & TRANSPORTS

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**Marantz CD6007 £339**

Best CD player under £500, Awards 2023 ★★★★★

No one can accuse Marantz of pushing the boundaries on the CD6007, but it has taken an already excellent CD player and made it a bit better.  
**Type** CD transport **Outputs** Coaxial, optical



**Arcam CD5 £699**

Best CD player £500-£1000, Awards 2023 ★★★★★

A tremendously talented player that deserves an audition if you're still holding on to your beloved CDs and want to give them a new lease of life.  
**Type** CD player **Outputs** Coaxial, optical, line-level



**Musical Fidelity M2sCD £699**

June 2020 ★★★★★

Musical Fidelity's CD player sounds expansive, detailed and delicately layered - a resoundingly listenable proposition.  
**Type** CD player **Outputs** Coaxial, optical



**Naim CD5si £1149**

October 2014 ★★★★★

The CD5si boasts a full-bodied, winningly enthusiastic approach to music. The absence of digital outputs means there's no upgrade path.  
**Type** CD player **Outputs** Line-out, DIN



**Cyrus CDi £1195**

Best CD player over £1000, Awards 2023 ★★★★★

Cyrus says this player is its best-sounding yet, and after listening to how confident and entertaining it sounds, it's hard to disagree.  
**Type** CD player **Outputs** Line-out, coaxial, optical



**Roksan Caspian M2 CD £1999**

Awards 2010 ★★★★★

The Caspian M2 CD has been around the block and is showing few signs of its age but it still combines skill with timing, dynamics and authority.  
**Type** CD player **Outputs** Line-out, coaxial, optical, USB, XLR



**Marantz SA-10 £5999**

April 2018 ★★★★★

One of the best digital source components around. Its unfussy disposition allows it to sound at home across a wide range of systems.

**Type** CD player **Outputs** Coaxial, optical



**Chord Blu MkII £7995**

January 2018 ★★★★★

The most informative and enjoyable sound we have heard from the CD format. Partner it with the DAVE and we doubt you can do better.

**Type** CD transport **Outputs** Coaxial x2 **Inputs** Coaxial, USB



£6000 and above

**DACs**

A DIGITAL-TO-ANALOGUE CONVERTER IS A MODERN HI-FI MUST

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**iFi Go Link £59**

October 2023 ★★★★★

The iFi Go Link feels like the perfect device for enhancing your headphones on the move and on a budget, living up to its brief.

**Size** 13.5cm long **Resolution** PCM 32-bit/384kHz, DSD 256, MQA



**iFi Zen DAC V2 £159**

Best DAC under £200, Awards 2023 ★★★★★

A good jump in quality over the Award-winning original, to keep features and performance best in class – and for not much extra money.

**Inputs** USB 3.0 **Size** 35 x 160 x 117mm **Res** PCM 384kHz, DSD256, MQA



**iFi hip-dac 2 £179**

April 2022 ★★★★★

At this level, you're unlikely to find a portable DAC as clear, zealous, fully featured, or as downright good-looking as the iFi hip-dac 2.

**Inputs** USB 3.0 **Size** 14 x 7 x 102mm **Res** 32-bit/384kHz, DSD256



**iFi Go Blu £199**

February 2022 ★★★★★

When portability is paramount, the iFi Go Blu is every millimetre the convenient sonic upgrade your phone needs.

**Size** 54 x 34 x 13mm **Resolution** 24-bit/96kHz (wired)



**Audioquest DragonFly Cobalt £269**

Best DAC £200-£300, Awards 2023 ★★★★★

If you loved the DragonFly Red and you're looking to make the next step up without compromising on size or form, this is something of a no-brainer

**Size** 6 x 2 x 1cm **Resolution** 24-bit/96kHz



**Chord Mojo 2 £449**

Best DAC £300-£1000, Awards 2023 ★★★★★

Familiar in form but next-level everywhere else, the Chord Mojo 2 is the *The Godfather Part II* of DAC sequels.

**Inputs** Coaxial, optical, USB **Size** 23 x 83 x 62mm **Res** 32-bit/768kHz, DSD



**Cambridge Audio DacMagic 200M £449**

Best DAC £300-£500, Awards 2021 ★★★★★

25 years and several evolutionary steps along the DacMagic line in terms of features and performance, the DacMagic 200M is a talented all-rounder.

**Inputs** Coax, opt, USB **Size** 6 x 22 x 19cm **Res** 32-bit/768kHz, DSD 512



Up to £300

£300 to £1000

£300 to £1K

**Audiolab M-DAC+ £695**

August 2016 ★★★★★

Audiolab's follow up to the M-DAC gets a great deal right with a sound that's neat, tidy and expansive. The M-DAC+ demands your attention.

**Inputs** Coaxial x2, optical x2 **Size** 11 x 25 x 29cm **Res** 32-bit/384kHz



£1000 to £10,000

**Chord Qutest £1195**

Best DAC over £1000, Awards 2023 ★★★★★

As with the 2Qute, the Qutest is a superior DAC which sets a new benchmark at this price with its clear and precise performance.

**Inputs** Coax x2, opt, USB **Size** 4 x 16 x 7cm **Res** 32-bit/768kHz PCM, DSD512



**Chord Hugo 2 £1895**

Best DAC over £1500, Awards 2022 ★★★★★

The Hugo 2 has a hefty price tag but, at this level, there isn't another DAC near that can communicate so unambiguously or so effortlessly.

**Inputs** Coaxial, opt, USB, BT **Size** 2 x 10 x 13cm **Res** 32-bit/768kHz



**Chord DAVE £7995**

Awards 2016 ★★★★★

The uniquely named DAVE costs a lot, but we would argue it's the best DAC money can buy. Build quality is excellent and the sound is very special.

**Inputs** Coaxial x2, opt x2, XLR **Size** 6 x 34 x 15cm **Res** 32-bit/768kHz



£10,000 and above

**Nagra HD DAC/MPS £23,600**

September 2018 ★★★★★

An effort that boasts a natural, fluid and informative sound. If you're in the market for the ultimate DAC, this would certainly be a frontrunner.

**Inputs** Coaxial x2, opt, AES/EBU x2, USB **Res** 24-bit/384kHz



**How to digitize your vinyl collection**

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**Turntables might not be cutting-edge tech, but for their look and feel – not to mention thrillingly articulate analogue sound – you can't beat them. The only thing your record collection lacks is portability, but there is a way to take those LPs with you**

**What do you need?**

The basic building blocks are: a turntable, a phono stage, an analogue-to-digital converter with USB output, and a computer with suitable recording software. There are turntables that come with a phono stage, analogue-to-digital converter and USB output built in. But most are at the budget end and focus on getting the job done rather than doing it particularly well.

Your recordings won't necessarily reflect the quality of sound possible from your records, though Audio Technica's AT-LP5 and Sony PS-HX500 vinyl-ripping decks do their best to buck that trend. If you already have a turntable, the best option is to buy a decent USB phono stage. We like the £90 Rega Fono Mini A2D and Pro-Ject also produce decent affordable alternatives.

**Recording software**

Channel D's Pure Vinyl offers a great deal of flexibility. It features built-in phono equalisation, so you can feed the turntable's output straight into the computer without needing a phono stage in the signal path.

There are also powerful editing functions that aid optimisation. The downside is a price of around £250 once the trial period is over.

A more affordable alternative is VinylStudio. This includes many of the features of Pure Vinyl, and costs around £20. Another option is Audacity. It's free and does a good enough job. While the interface looks complicated and some of the editing functions take a while to figure out, spend some time with it and it will become familiar enough.

**Patience is a virtue**

Before you start, make sure your deck is working optimally as that will aid a better recording. Is the cartridge tip free from fluff? Are the tracking force and bias adjusted correctly? Simple checks like these can help. Vinyl can be recorded only in real time. If a song lasts five minutes, that's how long it will take. Make sure the player isn't jostled during the recording, and keep the playback volume low to reduce any degradation of sound caused by feedback from the speakers. Make sure your

records are spotless. Any hisses, clicks and pops will be recorded. You can buy software to edit such sounds but it's time-consuming and processing could spoil the recording.

**It's all in the details**

Storage is affordable, so we'd be tempted to go down the high-resolution route: 24-bit/96kHz is the norm for many studios and seems a good compromise between quality and memory space. It doesn't really matter whether it's WAV, AIFF or FLAC files as long as it's compatible with what you normally use. Records don't have metadata built in such as album art and track information, so that data has to be manually entered. The process is fairly tedious, but it makes it easy to locate tracks. Your computer won't recognise individual tracks, so you'll have to stop recording when you've finished ripping each one and mark tracks that flow into each other.





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UNDER £200



iFi Zen DAC V2

★★★★★  
BEST DAC  
£200-£300



AudioQuest DragonFly Cobalt

★★★★★  
BEST DAC  
£300-£1000



Chord Mojo 2

★★★★★  
BEST DAC  
OVER £1000



Chord Electronics Qutest

★★★★★  
BEST PORTABLE  
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RACK



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## MUSIC STREAMERS

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**WiiM Pro Plus £219****Best music streamer under £300, Awards 2023 ★★★★★**

As a first, affordable introduction to the many and various charms of music streaming, the WiiM Pro Plus is hard to lay a glove on at the price.

**Outputs** RCA line-level, coaxial, opticalAWARD  
WINNER**Audiolab 6000N Play £449****Best music streamer under £500, Awards 2020 ★★★★★**

A great, affordable way to implement streaming into your system without compromising sonic quality. The best budget solution we've seen...

**Outputs** Line-in, coaxial, optical, subwoofer**Cambridge Audio MXN10 £449****Best music streamer £300-£750, Awards 2023 ★★★★★**

Cambridge Audio has crashed the entry-level music streamer party. Is the MXN10 the finest affordable music streamer on the market? It could well be.

**Outputs** Coaxial, optical, RCA line-levelPRODUCT  
OF THE YEAR

£500 to £1000

**Bluesound Node (2021) £549****Best music streamer under £750, Awards 2022 ★★★★★**

For this outlay the Node 2021 represents one of the most entertaining and comprehensive ways of adding music streaming to your hi-fi system.

**Outputs** RCA, coaxial, optical, subwoofer, 3.5mm**Cambridge Audio CXN100 £899****June 2024 ★★★★★**

Improvements in clarity, precision and spaciousness mean the amply featured and user-friendly CXN100 streamer remains the one to beat at this price.

**Inputs** Coaxial, optical, USB x2**Chord 2go £995****July 2020 ★★★★★**

The Chord 2go is a brilliant way to add streaming capability to the company's Award-winning Hugo 2 DAC (and only the Hugo 2). Works as a server too

**Inputs** Ethernet

£1000 to £5000

**Arcam ST60 £1199****Best music streamer £1000-£1500, Awards 2022 ★★★★★**

Arcam's first effort in the music streaming field is laudable: the ST60 ticks multiple streaming boxes while prioritising performance.

**Inputs** Coaxial, optical, USB**NAD C 658 £1499****Best music streamer £1000-£1500, Awards 2020 ★★★★★**

One of the most fully furnished, future-proofed and intuitive streamers we've come across – and one of the most convincing performers at this price.

**Inputs** Coaxial, optical, USB, phono, RCA**Melco N100 £1999****June 2020 ★★★★★**

An excellent choice if you're looking for a high-quality streamer with storage built-in and already have a capable DAC, or can add one.

**Inputs** USB 3.0 x2, ethernet **Outputs** USB 3.0

**Naim ND5 XS 2 £2299****Best music streamer over £1500, Awards 2023 ★★★★★**

Naim's 'entry-level' network streamer? Fear not; if this is the best your system ever sounds, you'll be doing your ears mighty proud.

**Inputs** USB, ethernet **Outputs** Line-out, DIN, coaxial, optical**AWARD WINNER****Technics SL-G700M2 £2899****September 2023 ★★★★★**

As an all-round proposition, the Technics SL-G700M2 is hard to better at the price. This is a well-conceived and surprisingly capable unit.

**Inputs** USB, coaxial, optical **Outputs** Line-out, balanced, coaxial, optical**Cambridge Audio Edge NQ £3500****March 2019 ★★★★★**

A truly fantastic streaming preamplifier that has a clear, bold and spacious presentation across all its many inputs. And it looks good, too.

**Inputs** Line-in x2, balanced XLR, coaxial, optical x2, HDMI, USB x2, BT**Moon 390 £4750****February 2019 ★★★★★**

A well connected streaming preamplifier that's uncluttered in design and use, and sounds terrifically dynamic, refined and engaging.

**Inputs** Line-in, MM/MC, balanced XLR, coaxial, optical, AES/EBU, HDMI x4**Linn Selekt DSM £5250****Reviewed online, 2019 ★★★★★**

If you're looking for a top-end one-box electronics solution, this is a good place to start. Its modular approach to high-quality sound is admirable.

**Inputs** Line-in, MM, MC, coaxial, optical x2, HDMI, USB, AirPlay**Naim NSC 222 £5700****August 2023 ★★★★★**

Want the performance of separates high-end hi-fi without all the clutter? Naim's NSC 222 streaming preamplifier could be the answer.

**Inputs** Line-in, MM, coaxial x2, optical x2, USB, AirPlay 2

£1000 to £5000

£5000 and above

**RADIOS**

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[View offers whf.cm/BBInternetRadios](https://whf.cm/BBInternetRadios)[View offers whf.cm/BBDBRadios](https://whf.cm/BBDBRadios)**Roberts Stream 94L £199****Best radio under £250, Awards 2023 ★★★★★**

The updated Stream 94L radio remains a firm favourite, with its extensive playback options, unfussy nature and hugely enjoyable sound.

**Battery** Optional **Size (hwd)** 25 x 17 x 13cm **Inputs** 3.5mm, USB, BT, wi-fi**AWARD WINNER**

"This radio is such an enjoyable performer. We have it playing throughout the day and never tire of it."

Up to £200

**Tivoli Model One Digital Generation 2 £299****Best radio over £200, Awards 2022 ★★★★★**

We really enjoy Tivoli's winning little box of tricks. Old-school radio feels and modern AirPlay 2 and Chromecast; it scores consistently high marks.

**Battery** No **Size (hwd)** 11.5 x 22.2 x 14cm **Inputs** Aux in, BT, Apple AirPlay

"The sound is more than enough for the neighbours to know about it, but it is still sonically regimented"

£200 and above

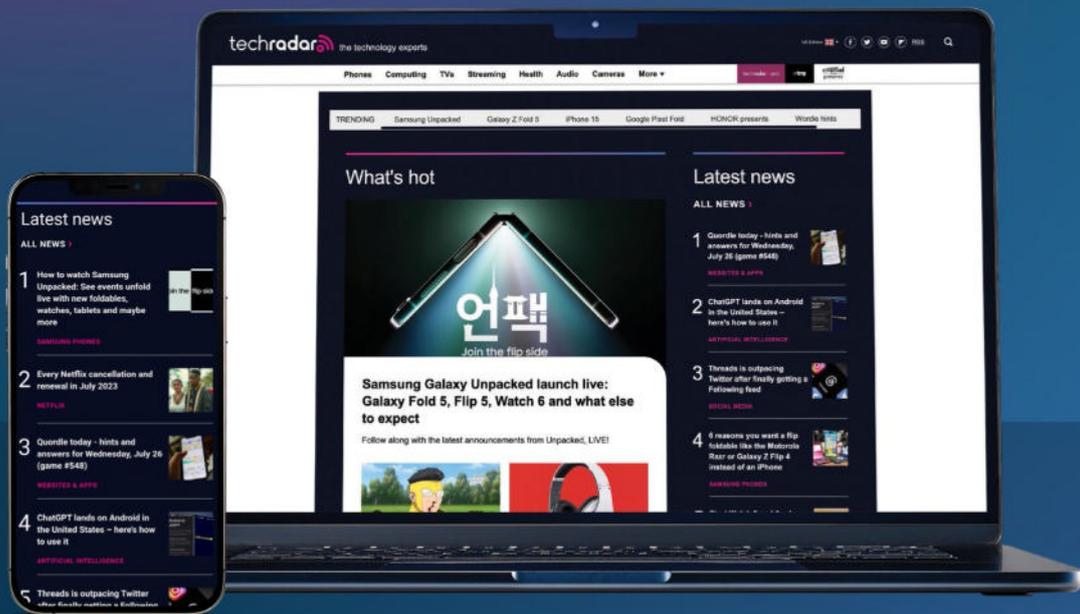
**Ruark M2 Mk4 £479****Best radio over £250, Awards 2023 ★★★★★**

If you're after a high-quality music system that looks great, is lovely to use and sounds wonderful, the Ruark R2 Mk4 should be at the top of your wishlist.

**Battery** No **Size (hwd)** 18.5 x 34 x 15cm **Inputs** 3.5mm aux, USB-C, BT**PRODUCT OF THE YEAR**

"Underneath that genial, likeable manner is an impressive amount of sonic prowess for a product of this type"

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## STEREO SPEAKERS

THEY BRING THE MUSIC TO YOUR EARS – SO CHOOSE WITH CARE

View offers  
whf.cm/BBHifiSpeakers**Dali Spektor 2 £199****Best standmount speaker under £200, Awards 2020 ★★★★★**

The 2s combine Dali's traditional strengths with a generous dose of entertainment that even Mission and Q Acoustics struggle to match.

**Size (hwd)** 17 x 28 x 28cm **Bi-wire** No **Finishes** 2

"The way these speakers handle dynamics is impressive"

Standmounts  
up to £200**Elac Debut B5.2 £250****Best standmount speaker under £300, Awards 2023 ★★★★★**

ELAC's latest budget standmounter is talented enough to worry the established competition.



"These new Debuts should be considered one of the company's finest efforts"

Standmounters from £200 to £500

**Dali Oberon 1 £349****February 2019 ★★★★★**

About the size of a shoe, these articulate and bold-sounding speakers have a wonderfully unfussy nature and are a joy to listen to.

**Size (hwd)** 27 x 16 x 23cm **Bi-wire** No **Finishes** 4

"Tonally, these are nicely judged and have a smooth treble that still has plenty of bite"

**KEF Q350 £499****Best standmount speaker £500-£750, Awards 2018 ★★★★★**

KEF has delivered a speaker that's a cut above the rest, with a sophisticated, insightful presentation that belies its modest price.

**Size (hwd)** 36 x 21 x 31cm **Bi-wire** No **Finishes** 2

"The Q350s display a level of clarity and subtlety unheard of at this price"

**Bowers & Wilkins 607 S3 £599****Best standmount speaker £300-£600, Awards 2023 ★★★★★**

B&amp;W has gone back to its roots with these stunning speakers, which, for their size and price range, really are a talented pair.

**Size (hwd)** 30 x 16.5 x 21cm **Bi-wire** Yes **Finishes** 3

"That's a sizeable amount of work done throughout, then. But how do the new 607 S3 sound? Incredibly fun."

**B&W 606 S3 £749****Best standmount speaker £600-£800, Awards 2023 ★★★★★**

If you can afford a step up above the 607 S3, want a larger-scale sound and need more oomph to your bass, the B&amp;W 606 S3 will be more to your liking.

**Size (hwd)** 35 x 19 x 30cm **Bi-wire** Yes **Finishes** 3

"With the bigger mid/bass driver and deeper cabinet comes added weight, punch and authority"

**Revel Concerta2 M16 £999****Best standmount speaker £750-£1000, Awards 2019 ★★★★★**

One of the best speakers we've ever heard below the £1000 mark. Make sure to partner carefully to get the best out of them.

**Size (hwd)** 37 x 22 x 27cm **Bi-wire** No **Finishes** 2

"They pound out crescendos with relish, refusing to harden or compress, even at high volume"

**KEF LS50 Meta £1000****Best standmount speaker £800-£1000, Awards 2023 ★★★★★**

KEF has taken a terrific speaker and made it even better with its innovative Metamaterial tech. The LS50 Metas are now the class leader at this level.

**Size (hwd)** 31 x 20 x 28cm **Bi-wire** No **Finishes** 4

"We're soon marvelling at the Metas' delicacy and precision. They sound so much more transparent than before"

**Wharfedale Linton £1000****May 2020 ★★★★★**

You could listen to these speakers for days and still not get tired. Effortless weight, spot-on stereo imaging and layer upon layer of marvellous detail.

**Size (hwd)** 30 x 19 x 25cm **Bi-wire** No **Finishes** 3 **Active** Yes

"The moment we start listening, we get a brilliant sense of scale and space from the Lintons"

Standmounters from £500 to £1000

**PMC Prodigy 1 £1250****Best standmount speaker £1000-£1500, Awards 2023 ★★★★★**

Hugely versatile and unfussy speakers – but it's their hugely enjoyable performance that first and foremost seals their five-star fate.

**Size (hwd)** 32 x 16.2 x 23.7cm **Bi-wire** No **Finishes** 1

"The focus and cost have been put into the engineering; hard to argue with when you hear just how spectacular the Prodigy 1 sound"

**Spendor Classic 4/5 £1600****June 2021 ★★★★★**

These Spendors are refined, insightful and wonderfully balanced – the ideal premium speakers for a small room.

**Size (hwd)** 31 x 19 x 16.5cm **Bi-wire** No **Finishes** 2

"These speakers are impressively unfussy about placement... in each case, they make the best of the situation"

**JBL 4309 £1899****February 2022 ★★★★★**

The JBL 4309 may not be the most sophisticated listen, but there's little at the price that delivers sound with such energy.

**Size (hwd)** 42 x 26 x 23cm **Bi-wire** Yes **Finishes** 2

"With appropriate music, they offer an intense emotional hit that most rivals just don't get close to"

**KEF R3 Meta £1900****Best standmount speaker £1500-£2500, Awards 2023 ★★★★★**

KEF knocks it out the park again: the R3 Metas are wonderfully transparent, refined speakers that are hugely entertaining performers, too.

**Size (hwd)** 42 x 20 x 34cm **Bi-wire** Yes **Finishes** 4

"We are proven right in our expectations: you can instantly hear the impact the inclusion of MAT technology has in these speakers"

**ATC SCM19 £2150****Awards 2016 ★★★★★**

It's quite a trick for a speaker to be highly analytical with music, yet never sound clinical or passionless. But that's the case with the SCM19s.

**Size (hwd)** 44 x 27 x 30cm **Bi-wire** No **Finishes** 2

"We like the SCM19s' ability to render a large soundstage and populate it with well focused instruments"

**Dynaudio Special Forty £2500****Best standmount speaker £2000+, Awards 2019 ★★★★★**

When paired with talented electronics, these standmounters will shine, offering a confident, muscular and subtle sound. Lots of fun.

**Size (hwd)** 36 x 20 x 32cm **Bi-wire** No **Finishes** 2

"They sound far bigger and more authoritative than a 36cm-high speaker has any right to"

**ProAc Response D2R £3295****Best standmount speaker over £1500, Awards 2021 ★★★★★**

Wonderfully transparent, yet never overly analytical, these ProAcs excel at giving the music the limelight. We can't ask for any more than that.

**Size (hwd)** 43 x 21 x 26cm **Bi-wire** Yes **Finishes** 6

"The Response D2Rs are wonderfully expressive speakers, even at low volumes"

**Mission 770 £3299****Best standmount speaker over £2500, Awards 2023 ★★★★★**

The link to the past will be the main attraction for some, but for us that is put in the shade by the speakers' excellent all-round performance.

**Size (hwd)** 59 x 30 x 30cm **Bi-wire** No **Finishes** 1

"We can't recall a similarly priced standmounter that has as much finesse when it comes to delivering bass"

**Fyne Audio F701 £3999****January 2021 ★★★★★**

Among the most musically engaging choices we have heard. If you have this much to spend, make sure you hear these before buying anything else.

**Size (hwd)** 46.5 x 28 x 39cm **Bi-wire** Yes **Finishes** 3

"They sound big, bold and enthusiastic in a way that eludes much of the high-end competition"

**KEF Reference 1 £4999****July 2018 ★★★★★**

These are superb all-rounders that work well across a wide range of music, systems and rooms. The dedicated stands are pricey though.

**Size (hwd)** 44 x 21 x 43cm **Bi-wire** Yes **Finishes** 3

"Rather than excel in a few specific areas, they perform well across the board"

**Ruark Audio MR1 Mk2 £329****Best desktop speaker, Awards 2023 ★★★★★**

Gorgeous retro design and superb sound make the Mk2s an update that manages to be even more appealing than its predecessor.

**Size (hwd)** 17 x 13 x 14cm **Powered** Yes **Finishes** 1

"Quite simply, these are superb speakers of their type"

Desktop speakers

**Q Acoustics M20 £379****July 2022 ★★★★★**

An unfussy, just add source set of powered speakers. For this money, you will be hard pushed to better the sound quality with hi-fi separates.

**Size (hwd)** 28 x 17 x 30cm **Powered** Yes **Finishes** 3

"The M20 is far more likely to become your entire music system than it is simply your new desktop speakers"

**Wharfedale Diamond 12.3 £499****Best floorstander under £500, Awards 2023 ★★★★★**

Terrifically accomplished for the money. Don't buy another pair of floorstanders at this level without trying these first.

**Size (hwd)** 98 x 18 x 32cm **Bi-wire** Yes **Finishes** 4

"They deliver a lovely layered sound that's brimming with detail and dynamic nuance"

Floorstanders up to £600

**Elac Debut 2.0 F5.2 £599****September 2019 ★★★★★**

A mature, honest presentation, neither sucking the life out of a piece, nor exaggerating it. Elac is one of the few companies to do this with such aplomb.

**Size (hwd)** 100 x 18 x 23cm **Bi-wire** No **Finishes** 1

"These Elacs can go low, but there is a bass clarity beyond the grasp of most floorstanders at this price"

**Dali Oberon 5 £699****Best floorstander £500-£1000, Awards 2020 ★★★★★**

A great option for floorstanders under £1000, these Dalis are fun-sounding speakers, with a great dose of transparency that's impressive for the price.

**Size (hwd)** 83 x 16 x 28cm **Bi-wire** No **Finishes** 4

"The Dali's sound simply flows in an organic and convincing manner"

**Q Acoustics 5040 £999****Best floorstander £500-£1500, Awards 2023 ★★★★★**

The Q Acoustics 5040 are even-handed performers that simply step out of the way of the music and let it shine.

**Size (hwd)** 97 x 18 x 28cm **Bi-wire** No **Finishes** 3

"These towers sound fast and fun. There is plenty of attack, but enough solidity and refinement to avoid accusations of aggression"

£600 to £1000

**Triangle Borea BR08 £999****Best floorstander £500-£1000, Awards 2022 ★★★★★**

These Triangles are exceptional – certainly good enough to challenge the best at this price. Play all genres of music and do it with an addictive charm.

**Size (hwd)** 102 x 21 x 32cm **Bi-wire** No **Finishes** 4

"They punch hard, combining high levels of detail with the ability to produce a cohesive and musical whole"

**Wharfedale Evo 4.4 £1199****Best floorstanding speaker £1000-£1500, Awards 2022 ★★★★★**

The Evo 4.4s are entertaining and detailed, with enough in the way of refinement to make them an excellent long-term choice.

**Size (hwd)** 106 x 25 x 35cm **Bi-wire** Yes **Finishes** 3

"Tying everything together is a fine sense of timing that results in surefooted rhythms"

**Q Acoustics 5050 £1299****July 2024 ★★★★★**

These floorstanders do everything their junior siblings, the 5040, can do but add an extra dose of authority and a slightly calmer manner.

**Size (hwd)** 102 x 39 x 34cm **Bi-wire** No **Finishes** 4

"Get the positioning right and you will get some of the most controlled, articulate bass we have heard at this level"

Floorstanders £1000 to £2000

**B&W 603 £1249****June 2019 ★★★★★**

The B&amp;W 603s are floorstanding speakers that are up there with the best at this price. You should give them a whirl...

**Size (hwd)** 98.5 x 19 x 34cm **Bi-wire** Yes **Finishes** 2

"They are blessed with a wow factor that other speakers at this price can only dream of, especially with voices"

Floorstanders £1000 to £2000

**Revel Concerta2 F35 £1899**

May 2019 ★★★★★

There aren't many speakers at this price that make listening to music as enjoyable as the Revel Concerta2 F35s.

**Size (hwd)** 102 x 21 x 31cm **Bi-wire** No **Finishes** 2



"It's impressive how effortless the Revels sound. They dispatch any genre you throw their way with minimal fuss"

**PMC Prodigy 5 £1995**

Best floorstander £1500-£2500, Awards 2023 ★★★★★

The Prodigy 5 deftly balance natural vocals, refined bass and a snappy sense of rhythm to deliver a supremely cohesive listening experience.

**Size (hwd)** 90.5 x 16.5 x 23.7cm **Bi-wire** No **Finishes** 1



"A genuinely fun listen; the sort of speakers you want to keep probing to see how they convey your favourite tracks"

**ProAc Response DT8 £1999**

Best floorstander £1500-£3000, Awards 2022 ★★★★★

The DT8s deliver such an entertaining sound, we can't help but recommend them. Take a bit of care with system-matching and they will impress.

**Size (hwd)** 98 x 20 x 23cm **Bi-wire** Yes **Finishes** 5 (plus 2 specials)



"The DT8s paint on an expansive sonic canvas, and locate instruments with precision and stability"

**Sonus faber Lumina V £2499**

March 2023 ★★★★★

The Sonus Faber Lumina V offer an enticing and easy-going approach to music replay that makes them a serious alternative to the usual choices.

**Size (hwd)** 105 x 28 x 37cm **Bi-wire** Yes **Finishes** 3



"Their midrange is a true highlight. It is as articulate and expressive as we have heard at this level"

£2000 to £5000

**Fyne Audio F501SP £2799**

January 2021 ★★★★★

The difference in price between the standard F501 and the SP version is massive, but then so is the jump in performance.

**Size (hwd)** 98 x 29 x 32cm **Bi-wire** Yes **Finishes** 3



"If you're looking for excitement and energy, we can't think of an alternative that betters these at the price"

**Spendor A7 £3200**

Best floorstanders over £2500, Awards 2023 ★★★★★

The A7s continue Spendor's knack for combining precision, clarity and subtlety with hugely enjoyable dynamics and rhythm.

**Size (hwd)** 94 x 18 x 31cm **Bi-wire** No **Finishes** 4



"The sound is terrifically clean and organised. The A7s also pack in bags of punch to keep things sounding lively"

£5000 and above

**Martin Logan ElectroMotion ESL X £5495**

June 2023 ★★★★★

They deliver a terrifically precise and spacious stereo soundstage. Voices and instruments are layered with care. They deserve a high place on any shortlist.

**Size (hwd)** 150 x 24 x 53cm **Bi-wire** Yes **Finishes** 1



"It's a fast, emotive presentation, one that gets straight to the core of the music"

**Positioning your speakers**

Read more at... [www.whathifi.com/features](http://www.whathifi.com/features)



**It's no good spending hundreds of pounds on your new speakers if you then don't allow them to perform properly. Take care with positioning to get them to sing.**

**Wall or in the open?**

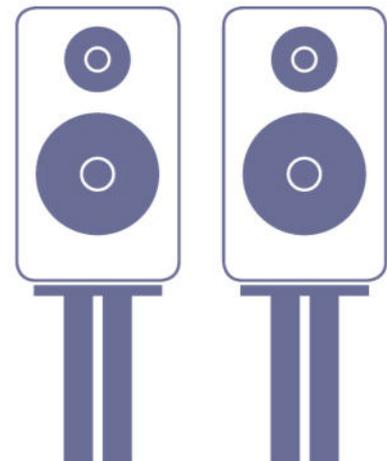
Where's the best place to position a speaker? Some speakers might sound better against a wall, while others prefer to be out in the open. Whatever your specific requirements, your speaker choice should primarily take into account how much space you have to house them.

**Use a stand**

Speaker stands keep the speaker cabinet rigid. This allows for more of the drivers' movement to be translated into sound and not wasted through vibrations. If your stands are on a carpet, make sure you have spikes to ensure stability.

**Tweeter height**

The higher-frequency sounds from a tweeter are more directional, and having them at ear level ensures optimum performance. So try to choose stands that will have your speaker at the right height for your seating position.



**Audiovector SR3 Avantgarde £6320**

January 2019 ★★★★★

These floorstanders match their impressive price with impressive sound. They demonstrate a good deal of organisation, stunning clarity and real punch.

**Size (hwd)** 103 x 19 x 33cm **Bi-wire** Tri-wire **Finishes** 8



"Importantly, they are subtle, conveying nuances with skill"

£5000 and above

**ATC SCM40A £6800**

April 2014 ★★★★★

The price looks steep but factor in built-in amplification and exceptional sound, and the SCM40As emerge as something of a high-end bargain.

**Size (hwd)** 98 x 37 x 34cm **Bi-wire** No **Finishes** 2 **Active** Yes



"Once up and running, these ATCs are deeply impressive speakers"

## SYSTEMS

CONVENIENCE DOESN'T HAVE TO MEAN LOWER QUALITY

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whf.cm/BBHifiSystems

**Denon D-M41DAB £329**

Best hi-fi system under £500, Awards 2023 ★★★★★

Denon hasn't rested on its laurels. It's managed to better the M40, delivering improved sound and functionality. The best just got better.

**Inputs** CD, line-in, optical x2, BT, DAB/FM **Outputs** Subwoofer



Up to £500

**Elac Debut ConneX DCB41 £499**

Best powered speakers, Awards 2023 ★★★★★

We are big fans of systems such as this. They are neat, well-featured and the best of the breed represent excellent value. This is one of them.

**Inputs** USB, line-in/phono, opt, Bluetooth, HDMI (ARC) **Outputs** Subwoofer

**Triangle AIO Twin £699**

Best speaker system under £750, Awards 2023 ★★★★★

If you're looking for a fun music system that also sounds hugely capable in hi-fi terms, at a decent price, this system is worth your attention.

**Inputs** Line-in/phono, opt, Bluetooth, USB, ethernet **Outputs** Subwoofer

**KEF LSX II LT £899**

April 2024 ★★★★★

The LSX II LT is a fantastic alternative to the pricier LSX II. By taking a great system and streamlining it without compromising sound, KEF has nailed it.

**Inputs** HDMI ARC, USB-C, optical, ethernet **Outputs** Subwoofer

**Technics SA-C600 £899**

Best hi-fi system £500-£1500, Awards 2023 ★★★★★

A really well-conceived product that fully deserves the *What Hi-Fi?* Awards wins that have followed. Highly recommended.

**Inputs** RCA line-in, phono, USB, opt., coaxial **Outputs** Sub, 3.5mm h'phone



£500 to £1500

**KEF LSX II £1199**

Best speaker system £750-£1500, Awards 2023 ★★★★★

A stylish streaming system that comes with none of the baggage and boxes a separates set-up brings. Nothing else really comes close at this level.

**Inputs** HDMI ARC, USB-C, optical, ethernet **Outputs** Subwoofer

**Rega System One £999**

May 2022 ★★★★★

The System One gets the basics of music reproduction spot-on, delivering musical cohesion and dynamic expression that eludes most alternatives.

**Inputs** Line-in x2, MM phono **Outputs** 3.5mm headphone



£1500 to £2500

**Ruark Audio R410 £1299**

January 2024 ★★★★★

A flexible, function-rich and great-sounding hi-fi system that somehow manages to be a good-looking piece of furniture at the same time.

**Inputs** Line-in, optical, USB-C, MM phono, HDMI (eArc)



**Arcam SA30 £1999**

May 2020 ★★★★★

A fine example of how well music streaming can be implemented into traditional hi-fi – and how discreetly. Just add a control device and speakers.

**Inputs** Line-in x3, coaxial x2, opt x2, USB, MM and MC phono



**Naim Uniti Atom £1999**

Best hi-fi system over £1500, Awards 2023 ★★★★★

Rarely does a product look and sound this good. A triumph of design, the Atom boasts class-leading levels of insight and clarity.

**Inputs** Line-in, coaxial, opt x2, USB, BT, wi-fi **Outputs** Line-out, headphone



**KEF LS50 Wireless II £2449**

Best speaker system £1500-£3000, Awards 2023 ★★★★★

The LS50 Wireless IIs arrived with a world of expectation on their shoulders – and they well and truly met them. This is a sequel of rare quality.

**Inputs** Line-in, optical, 3.5mm, HDMI (eARC), BT, wi-fi **Outputs** Subwoofer



£2500 and above

**JBL 4329P Studio Monitor £3499**

Best speaker system over £3000, Awards 2023 ★★★★★

So versatile in so many ways, while managing to sound so mature, these JBL's are a milestone in all-in-one speaker systems of this kind.

**Inputs** XLR, 3.5mm, opt., USB **Outputs** Subwoofer



**KEF LS60 Wireless £5999**

August 2022 ★★★★★

Everything a modern all-in-one hi-fi system should be, combining eye-catching looks, a suite of useful features and outstanding sound quality.

**Inputs** HDMI eARC, optical, coaxial, RCA, ethernet **Outputs** Subwoofer x2



Multi-room

**Audio Pro System from £650**

Best multi-room system under £1000, Awards 2018 ★★★★★

Audio Pro's multi-room system is not the most advanced, but no other system makes more sound-per-pound sense than this one.

**Res** 16-bit/44.1kHz **App** iOS, Android **Formats** MP3, FLAC, WMA



**Sonos System from £1047**

Best multi-room system, Awards 2023 ★★★★★

If you don't need hi-res, Sonos is an obvious choice for multi-room. A great user experience alongside a full-bodied, insightful sound.

**Res** 16-bit/44.1kHz **App** iOS, Android **Formats** MP3, FLAC, WMA



TURNTABLES

DECKS TO KEEP THE VINYL REVIVAL THRIVING

View offers  
whf.cm/BBturntables

£150 to £300

**Pro-Ject Primary E £159**

Best turntable under £200, Awards 2023 ★★★★★

Pro-Ject has revised a budget deck to nail the under £150 market – and has succeeded on every front.

**Speed** 33⅓, 45rpm **Size (hwd)** 11 x 42 x 33cm



**Audio Technica AT-LP3 £199****Best turntable under £200, Awards 2017 ★★★★★**

A fully automatic turntable that doesn't scrimp on performance, this is the ideal entry-level deck for those looking to dip their 'vinyl toes' in.

**Speed** 33½, 45rpm **Size (hwd)** 13 x 44 x 35cm**Rega Planar 1 £275****Best turntable £200-£500, Awards 2023 ★★★★★**

This revamped entry-level deck from Rega doesn't sound anything like an entry-level deck. Pleasingly solid, accurate and agile – it's a lovely listen.

**Speed** 33½, 45rpm **Size (hwd)** 12 x 45 x 36cm**Sony PS-HX500 £249****Best USB turntable, Awards 2018 ★★★★★**

A turntable with the ability to rip vinyl into hi-res files, but it's also an entertaining deck with a big, open sound.

**Speed** 33½, 45rpm **Size (hwd)** 11 x 43 x 36cm**Pro-Ject Essential III £259****October 2017 ★★★★★**

Another excellent turntable from Pro-Ject. The Essential III is easy to set up and offers a detailed and musical performance.

**Speed** 33½, 45rpm **Size (hwd)** 11 x 42 x 33cm**Audio Technica AT-LP5 £299****Awards 2016 ★★★★★**

A pleasure to use and listen to, the LP5 boasts both ease of use and the added bonus of a USB output. At this price there's none better.

**Speed** 33½, 45rpm **Size (hwd)** 16 x 45 x 35cm**Rega Planar 1 Plus £329****July 2018 ★★★★★**

All the sonic talents of the Planar 1 with an equally talented phono stage built in. The Plus is a winning combination of convenience and excellent quality.

**Speed** 33½, 45rpm **Size (hwd)** 12 x 45 x 36cm**Dual CS418 turntable £499****July 2022 ★★★★★**

A strong performer and a proper alternative to the established class leaders, the CS 418 delivers a performance that puts it in the front runners at the price.

**Speed** 33½, 45, 78rpm **Size (hwd)** 14.5 x 43.5 x 37cm**Rega Planar 3/Elys 2 £649****Best turntable £500-£750, Awards 2021 ★★★★★**

Rega builds on the 3's predecessor by adding extra servings of clarity, precision and insight. The result is the best RP3 yet.

**Speed** 33½, 45rpm **Size (hwd)** 12 x 45 x 36cm**Pro-Ject Debut Pro £699****Best turntable £500-£750, Awards 2023 ★★★★★**

The Pro is the most ambitious and capable Pro-Ject Debut model yet. It's right up there with the very best in the class.

**Speed** 33½ & 45rpm (78rpm with an adaptor) **Size (hwd)** 11 x 42 x 32cm**Technics SL-1500C £899****Best turntable £750-£1500, Awards 2023 ★★★★★**

With a really good built-in phono stage and an auto-lift function, this Technics is a beautifully made, fuss-free record player that sounds great.

**Speed** 33½, 45, 78rpm **Size (hwd)** 23 x 16 x 12cm

£150 to £300

£300 to £500

£500 to £1000

£1000 to £2000

**Clearaudio Concept £1195**

Best turntable £800-£1200+, Awards 2017 ★★★★★

A thoroughly sorted, easy-to-own package with tremendous sound, combining punch, extension and tonal variation in equal measure.

Speed 33⅓, 45, 78rpm Size (hwd) 14 x 42 x 35cm



**EAT B-Sharp Super Pack £1368**

July 2018 ★★★★★

EAT's entry-level deck is a fine one that can count among its talents a sense of control, sure composure and a well judged sonic balance.

Speed 33⅓, 45, 78rpm Size (hwd) 14 x 46 x 35cm



**Rega Planar 6/Ania £1469**

Best turntable £1500-£2000, Awards 2023 ★★★★★

A refined, articulate and precise turntable that's lovely to listen to. It requires good system-matching to get the best out of it though.

Speed 33⅓, 45rpm Size (hwd) 12 x 45 x 37cm



**Rega Planar 8/Apheta 2 £2439**

Best turntable over £1000, Awards 2019 ★★★★★

Clever engineering and sky-high standards make this Rega's most ambitious and boundary-pushing turntable yet. It's gorgeous in sound and design.

Speed 33⅓, 45rpm Size (hwd) 13 x 42 x 32cm



**Vertere DG-1 S/Magneto £3550**

Best turntable over £2000, Awards 2023 ★★★★★

The Vertere DG-1 is up against some mighty competition, but given what we've heard it can go into any such comparisons with confidence.

Speed 33⅓, 45rpm Size (hwd) 13 x 38 x 37cm



£2000 to £10,000

**VPI Prime £4200**

Awards 2015 ★★★★★

A confident-sounding package that can organise with the best and maintain composure even when faced with the most challenging music.

Speed 33⅓, 45rpm Size (hwd) 18 x 54 x 40cm



**VPI Prime Signature £6000**

February 2018 ★★★★★

This upgraded version of the standard Prime builds on that model's strengths, with more insight, stronger dynamics and a lovely stability.

Speed 33⅓, 45rpm Size (hwd) 18 x 54 x 40cm



**Vertere Acoustics MG-1 MkII/Mystic £9300**

Online ★★★★★

Renders sound with a combination of precision, agility and dynamic dexterity that we haven't heard bettered by any rival near this price.

Speed 33⅓, 45rpm Size (hwd) 18 x 54 x 40cm



£10,000 and above

**Clearaudio Innovation Wood/DaVinci V2 £15,900**

2010 ★★★★★

This gorgeous, mind-blowingly expensive turntable is so good, we've been using it as our reference deck for years now. Extravagant, but it's worth it.

Speed 33⅓, 45, 78rpm Size (hwd) 14 x 47 x 39cm



**Linn Klimax LP12 £18,670**

July 2017 ★★★★★

A mightily expensive deck that has the unmistakable feel of real quality. It's startlingly better than previous LP12 turntables.

Speed 33⅓, 45, 78rpm Size (hwd) 14 x 45 x 36cm



## WIRELESS SPEAKERS

FREE YOUR MUSIC WITH ONE OF THESE STREAMING WONDERS

View offers  
whf.cm/BBWirelessSpeakers**Tribit Stormbox Micro 2 £60**

April 2023 ★★★★★

It's quite astonishing just how much you get out of this little speaker; an enthusiastic and capable performer at this ultra-budget price.

**Size (hwd)** 10 x 10 x 4.3cm **Battery** 12 hours

"There's energy in spades... voices in particular shine through the Micro 2: they are clear and detailed"

**Apple HomePod Mini £99**

Best home wireless speaker under £100, Awards 2023 ★★★★★

It's much smaller and more affordable than expected, but the most surprising thing about the HomePod Mini is its superb sound.

**Size (hw)** 4 x 14cm **Battery** No

"It's clear that the HomePod Mini comfortably outperforms its size and price"

**JBL Flip 6 £130**

May 2022 ★★★★★

Another resoundingly five-star product, with sonic upgrades in terms of clarity and breadth across the frequencies over its Award-winning forebear.

**Size (hwd)** 17.8 x 6.8 x 7.2cm **Battery** 12 hours

"For a nominal price hike over the launch price of the Flip 5, there's certainly more detail here, too"

**Sonos One SL £149**

March 2020 ★★★★★

A Sonos One without the smarts, the SL (unlike the Play:1) will pair with a One to make a stereo pair – but it sounds great as a standalone as well.

**Size (hwd)** 16 x 12 x 12cm **Battery** No

"The sonic performance, streaming options and app support are among the best we've tested at this level"

**JBL Charge 5 £160**

Best portable wireless speaker under £200, Awards 2023 ★★★★★

The Charge 5 is as good a sound as you can get in a portable speaker for under £200. It improves sonically and aesthetically over its predecessor.

**Size (hwd)** 9.6 x 22 x 9.4cm **Battery** 20 hours

"When it comes to rugged, portable, no-nonsense Bluetooth speakers, some product lines have consistently impressed us"

**Ultimate Ears Megaboom 3 £170**

Reviewed online, 2018 ★★★★★

The rugged, weather-proof Megaboom 3's sleek design and improved sound are worth your time, especially at under £200.

**Size (hwd)** 23 x 9 x 9cm **Battery** 20 hours

"An enthusiastic sound that favours excitement while still keeping an eye on balance"

**Audio Pro A10 £180**

February 2019 ★★★★★

A brand-new cylindrical design, but underneath that trendy outfit is the hugely enjoyable sonic character that we love from Audio Pro.

**Size (hwd)** 19 x 14 x 14cm **Battery** No

"It snaps along with that same intensity and intelligent organisation we've come to expect"

**Audio Pro Addon C3 £180**

Best home wireless speaker £100-£250, Awards 2022 ★★★★★

A smaller version of the talented and similarly-featured C5, this petite Audio Pro sets itself apart by being battery-powered and portable.

**Size (hwd)** 12 x 22 x 14cm **Battery** 15 hours

"By multi-room speaker standards, this is a remarkably refined performance"

**Dali Katch G2 £349**

Best portable wireless speaker over £200, Awards 2023 ★★★★★

Dali Katch G2 is simply the classiest and best-sounding speaker of its kind you can buy for the money. Sonically, it is nothing short of a delight.

**Size (hwd)** 14 x 27 x 5cm **Battery** 30 hours

"As we increase the volume, we find the Katch G2's room-filling sound neither loses clarity nor errs toward harshness"

Up to £100

£100 to £250

£250 and above

£250 and above

**Audio Pro C20 £450**

June 2024 ★★★★★

The performance up for grabs here is so authoritative, and so detailed, it offers a taste of hi-fi in wireless speaker form.

**Size (hwd)** 20 x 41 x 22cm **Battery** No



"While its wide, open soundstage fills our test room with ease, this isn't a speaker that is all about showing its muscle above all else"

**Naim Mu-so Qb 2nd Generation £749**

Best home wireless speaker over £500, Awards 2023 ★★★★★

The greatest value here is not found in the features or design, but in a sonic performance that will effortlessly dispense of any one-box rival near this price.

**Size (hd)** 17 x 14cm **Battery** No **Voice assistant** Siri



"The overall presentation is muscular but lean; there's plenty of bass weight, but balance is never skewed"

**Naim Mu-So 2 £1299**

September 2019 ★★★★★

We're surprised just how much sonic progression the Naim Mu-so 2 brings over the original – Naim says that 95 per cent of the Mu-so 2 is new.

**Size (hwd)** 12 x 63 x 26cm **Battery** No



"Musicality is still at the heart of the Mu-so 2's performance as a soundbar"

**Sonus Faber Omnia £1599**

May 2022 ★★★★★

If you value openness and clarity, the Omnia is one of the finest of its kind you could hand over music duties to. And one of the best looking too, to our eyes.

**Size (hwd)** 13 x 65 x 28cm **Battery** No



"Close your eyes and you don't need to stretch your imagination to believe the sound is coming out of a pair of standmounters"

**Linn Series 3 £2950**

April 2020 ★★★★★

The most expensive wireless speaker we've ever tested also happens to be the best. It's hardly a bargain, but we are left convinced of its appeal.

**Size (hwd)** 30 x 25 x 21cm **Battery** No



"The Series 3 may not look like it, but make no mistake, this is proper hi-fi"

**Amazon Echo Plus (2018) £140**

January 2019 ★★★★★

The 2nd-gen Plus is Amazon's flagship smart speaker, and it finally has the sonic talents to match its smarts – especially at this price.

**Size (hwd)** 15 x 10 x 10cm **Battery** No **Voice assistant** Alexa



"Its sonic performance makes it worthy in isolation"

**Amazon Echo Dot (5th Generation) £55**

August 2023 ★★★★★

The 5th Generation of Amazon's affordable smart speaker may be small and sweet, but it's more than capable of punching above its weight.

**Size (hwd)** 10 x 10 x 9cm **Battery** No **Voice assistant** Alexa



"The sonic experience is remarkable when you also consider the Dot's remarkably slim price tag and unobtrusive design."

**Sonos One £199**

Awards 2017 ★★★★★

Essentially a Play:1 with Alexa. The odd software niggle at launch, but one of the best wireless speakers around just got smarter.

**Size (hwd)** 16 x 12 x 12cm **Battery** No **Voice assistant** Alexa



"The soundstage is spacious and impressively organised, with vocals given plenty of breathing room"

**Apple HomePod 2 £299**

Best home wireless speaker £100-£300, Awards 2023 ★★★★★

Smarter, more flexible and better sounding than before; for avid Apple users, the HomePod 2 is arguably the best speaker of the type you can buy.

**Size (hd)** 17 x 14cm **Battery** No **Voice assistant** Siri



"Of course, it's the sound we're most interested in, and the new HomePod delights in this regard from the off"

**Sonos Era 300 £449**

Best home wireless speaker £300-£500, Awards 2023 ★★★★★

With its huge scale of engaging sound, wide range of features and seamless Sonos experience, the Era 300 is an impressive speaker that can do it all.

**Size (hwd)** 16 x 26 x 18.5cm **Battery** No **Voice assistant** Sonos, Alexa



"The first impression we get with the Era 300 is of scale. The spread of sound is immense"

Smart speakers



# HOME CINEMA

## BLU-RAY PLAYERS

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View offers  
whf.cm/BBBluRayPlayers

### Panasonic DP-UB150EB £129

March 2020 ★★★★★

A highly competent machine at an impressively low price, this 4K Blu-ray player represents a big step up from streaming your UHD content.

**Compatibility** 4K Blu-ray, Blu-ray, DVD, CD **HDMI out 1**



### Sony UBP-X700 £199

Best 4K Blu-ray player under £250, Awards 2021 ★★★★★

This 4K player delivers a stunningly natural picture for an affordable price. It'll be tough to knock this Sony off its perch.

**Compatibility** 4K Blu-ray, Blu-ray, DVD, SACD, CD **HDMI out 2**



### Panasonic DP-UB820EB £299

Best 4K Blu-ray player, Awards 2023 ★★★★★

Delivers on multiple fronts, supporting all major HDR formats, delivering a hugely immersive and impactful picture, and all backed up by strong audio.

**Compatibility** 4K Blu-ray, Blu-ray, DVD, CD **HDMI out 2**

PRODUCT OF THE YEAR



Up to £500

## HOME CINEMA AMPLIFIERS

POWERFUL SOUND THAT TRULY BRINGS MOVIES TO LIFE

View offers  
whf.cm/BBHomeCinemaAmps

### Sony TA-AN1000 £999

Best home cinema amplifier under £1500, Awards 2023 ★★★★★

Sony has delivered an AV amp that has reignited the same excitement that we felt with its last model, here with additional dynamics, scale and accuracy.

**Power** 7 x 85W **Dolby Atmos** Yes **HDMI in/out** 6/2

PRODUCT OF THE YEAR



### Denon AVC-X3800H £1499

Best home cinema amplifier over £2000, Awards 2022 ★★★★★

Despite being more expensive than its predecessor, the AVC-X3800H's updated feature spec and new and improved sound make it an excellent buy.

**Power** 9 x 105W **Dolby Atmos** Yes **HDMI in/out** 6/3



### Arcam AVR 5 £2000

September 2022 ★★★★★

While it lacks some of the functionality and usability of the competition, the AVR5 delivers an impeccable sonic performance.

**Power** 7 x 60W **Dolby Atmos** Yes **HDMI in/out** 7/2



### Yamaha RX-A6A £2299

October 2022 ★★★★★

With its exhaustive feature set, this is the 'choose-your-own adventure' of AVRs, with a completist approach to almost every aspect of its configuration.

**Power** 9 x 150W **Dolby Atmos** Yes **HDMI in/out** 7/3



£500 to £2000

**Denon AVC-X6800H £2799**

July 2024 ★★★★★

Denon delivers on its trademark sound characteristics with a clearer and punchier model, topped off with an improved user experience.

**Power** 11 x 140W **Dolby Atmos** Yes **HDMI in/out** 7/3NEW  
ENTRY**Arcam AVR31 £4799****Best home cinema amplifier over £1500, Awards 2023 ★★★★★**

If future-proofed features are as important as having the very best sound quality, the AVR31 is an ideal choice to make your home cinema sing.

**Power** 7 x 100W **Dolby Atmos** Yes **HDMI in/out** 7/3AWARD  
WINNER**JBL Synthesis SDR-35 £6000****Best home cinema amplifier over £2000, Awards 2022 ★★★★★**

The JBL Synthesis SDR-35 is an extraordinarily good home cinema receiver. In terms of sound quality, it's in a whole different league.

**Power** 7 x 100W **Dolby Atmos** Yes **HDMI in/out** 7/3

## PROJECTORS

BECAUSE A MASSIVE PICTURE IS HOME CINEMA

View offers  
[whf.cm/BBProjectors](https://whf.cm/BBProjectors)**BenQ W1800 £1099****Best projector under £1250, Awards 2023 ★★★★★**

BenQ's decision to focus with the W1800 on what we guess could be considered good old-fashioned home cinema values pays off handsomely.

**Throw ratio** 1.13-1.46:1 **Inputs** HDMI x2, USB 2.0 **Speakers** YesAWARD  
WINNER**Epson EH-TW7100 £1599****Best projector £1250-£2000, Awards 2023 ★★★★★**

The Epson EH-TW7100 stretches the limit of what can be considered a budget big screen device, but it more than justifies its price.

**Throw ratio** 1.32-2.15:1 **Inputs** HDMI x2, USB 2.0 x2 **Speakers** YesAWARD  
WINNER**Hisense PL £1999****Best ultra-short-throw projector, Awards 2023 ★★★★★**

With its clean, punchy and solid image, the Hisense PL1 is a gem at this price. It's a TV alternative that actually lives up to its promise..

**Throw ratio** 0.25:1 **Inputs** HDMI x2, USB 2.0 x2 **Speakers** YesAWARD  
WINNER**Epson EH-TW9400 £2899****Best projector £2000-£4000, Awards 2023 ★★★★★**

The perfect compromise if you want a super-sized faux-4K picture on a budget. The picture vibrancy and sense of depth are impressive.

**Throw ratio** 1.35-2.84:1 **Inputs** HDMI x2, USBx2 **Speakers** NoAWARD  
WINNER**Sony VPL-XW5000ES £5999****Best projector £4000-£10,000, Awards 2023 ★★★★★**

Despite being Sony's cheapest 4K laser projector ever, the XW5000ES manages to deliver gorgeously cinematic and detailed pictures.

**Screen size** up to 200in **Inputs** HDMI x2 **Speakers** NoPRODUCT  
OF THE YEAR**Sony VPL-XW7000ES £14,990****Best projector over £10,000, Awards 2023 ★★★★★**

The VPL-XW7000ES is a simply stunning projector. It is even capable of surpassing the typical 'real' cinema experience.

**Screen size** up to 200in **Inputs** HDMI x2 **Speakers** NoAWARD  
WINNER

£2000 and above

Up to £2000

£2000 to £15,000

# SET-TOP BOXES

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whf.cm/BBSetTopBoxes](https://whf.cm/BBSetTopBoxes)

## Humax Aura from £249

**Best PVR, Awards 2023 ★★★★★☆**

As a Freeview PVR, the Humax Aura is solid, but its useability foibles and lack of Netflix give pause for thought.

**Tuners 3 Storage 1TB/2TB Ultra HD Yes**



PVRs

## Sky Q 2TB from £199

**Best subscription box, Awards 2023 ★★★★★**

Sky has overhauled its TV package with Q and made it more enticing and versatile thanks to 4K support, but it comes with a high price tag.

**Tuners 4 Storage 2TB Ultra HD Yes**



Subscription boxes

# SOUNDBARS

A BRILLIANT WAY TO IMPROVE YOUR TV'S SOUND

[View offers  
whf.cm/BBSoundbars](https://whf.cm/BBSoundbars)

## Sony HT-S2000 £349

**May 2024 ★★★★★**

If you want clearer, more dynamic and direct sound from your TV at a price that won't put you off, then this Sony really is an easy sell.

**Size (hwd) 6.4 x 80 x 12cm Inputs Optical, HDMI eARC Sub No**



Up to £500

## Sonos Beam (Gen 2) £449

**Best soundbar under £500, Awards 2023 ★★★★★**

A compact soundbar that pumps out an exceptional sound for its size and price. Now with Dolby Atmos capabilities. Impressive.

**Size (hwd) 7 x 65 x 10cm Inputs Optical, HDMI ARC, AirPlay Sub No**



## Dali Katch One £649

**Best soundbar £500-£1000, Awards 2018 ★★★★★**

Great for music, even better for films, this tidy soundbar delivers all the sound your living room is likely to need.

**Size 7 x 86 x 17cm Inputs HDMI, Optical, 3.5mm Sub No**



## Dali Kubik One £799

**Awards 2018 ★★★★★**

A gorgeous and complete package, Dali's debut soundbar impresses with its hugely engaging sound and smart, well equipped exterior.

**Size (hwd) 15 x 98 x 10cm Inputs Line-in x2, optical Sub No**



£500 to £1000

## Sonos Arc £899

**Best soundbar £500-£1000, Awards 2022 ★★★★★**

The Arc is a stunning performer, delivering one of the most immersive Dolby Atmos experiences we've heard from a soundbar.

**Size 9 x 114 x 12cm Inputs HDMI, Optical, ethernet Sub No**



## Sony HT-A7000 £1199

**Best soundbar £500-£1500, Awards 2023 ★★★★★**

A powerful, musical and immersive single soundbar that succeeds where even many multi-speaker systems fail.

**Size (hwd) 8 x 130 x 14cm Inputs HDMI x2, opt, USB Sub No**



**Sennheiser Ambeo Soundbar Plus £1299**

February 2023 ★★★★★

If you want a Dolby Atmos soundbar that creates a vast room-filling sound from a compact chassis, the Ambeo Plus has to go on your shortlist.

**Size (hwd)** 7.5 x 105 x 12cm **Inputs** HDMI x3, opt, RCA line in **Sub** Opt.

**Sennheiser Ambeo Soundbar Max £2199**

Best soundbar over £1500, Awards 2023 ★★★★★

This is the best soundbar we've tested, and the best way to get surround sound into your room without filling it with loads of individual speakers.

**Size (hwd)** 14 x 127 x 17cm **Inputs** HDMI x4, opt, RCA line in **Sub** No

AWARD WINNER



## SPEAKER PACKAGES

GOOD SURROUND-SOUND IS A MOVIE-MAGIC MUST

[View offers whf.cm/BBSpeakerPackages](https://www.whfcm.com/BBSpeakerPackages)
**Wharfedale DX-3 HCP £499**

Best speaker package under £500, Awards 2023 ★★★★★

The DX-3 HCP delivers sound above and beyond what most soundbars are capable of while being half the price of most models that we recommend.

**Size (hwd)** Centre speaker 12 x 31 x 12 cm **Finishes** 2

AWARD WINNER



"All of the sound effects are detailed and placed accordingly, without sounding cluttered or claustrophobic"

**Q Acoustics 3010i 5.1 Cinema Pack £895**

Best speaker package £500-£1000, Awards 2020 ★★★★★

The subwoofer needs a bit more kick, but this fantastic sub-£1000 5.1 package delivers a clear, well-balanced and expressive performance.

**Size (hwd)** Centre speaker 15 x 43 x 22 cm **Finishes** 4



"This compact set really hits the spot with its great clarity, integration, expression and ample bass weight"

**Wharfedale Diamond 12.1 HCP £999**

Best speaker package £500-£1000, Awards 2023 ★★★★★

Large enough to provide cinematic scale with a wide soundfield, but affordable enough to be accessible, this is a fine choice for music and film.

**Size (hwd)** Centre speaker 15 x 43 x 22 cm **Finishes** 4

AWARD WINNER



"The Wharfedale Diamond 12.1 HCP is essentially the Audrey Hepburn of home theatre speaker packages"

**Sony HT-A9 £1159**

January 2021 ★★★★★

Successfully combines the ease and streaming features of a soundbar with the consistency and immersion of a traditional surround package.

**Size (hwd)** Speakers 31 x 16 x 15cm **Finishes** 1



"The wide dispersion of the HT-A9's speakers is instantly striking and undeniably effective"

**Q Acoustics 3050i 5.1 Cinema Pack £1275**

Best speaker package £1000-£1500, Awards 2021 ★★★★★

Add in floorstanders to the above, and this speaker package hits the sweet spot with an infectious musical and powerful performance.

**Size (hwd)** Centre speaker 15 x 43 x 22 cm **Finishes** 4



"It's worth stressing just how talented the 3050i 5.1 Cinema Pack is. It's an instant hit"

**Wharfedale Diamond 12.3 HCP £1299**

Best speaker package £1000-£1500, Awards 2023 ★★★★★

Wharfedale's Diamond 12 range delivers another top performance with this dapper 5.1 package that's mature, stylish and practical.

**Size (hwd)** Centre speaker 18 x 48 x 21cm **Finishes** 4

AWARD WINNER



"This is a detailed and dynamically responsive system that delivers beyond its price point"

**Elac Debut 2.0 5.1 Home Theatre System £1499**

October 2019 ★★★★★

This Elac package is a real match-winner, whether for your two-channel or the full surround. You'll be hard pushed to find better at this price.

**Size (hwd)** Centre speaker 18 x 54 x 22cm **Finishes** 1



"What's astonishing is the realism of the soundscape – a delightfully balanced audio image that lets the equipment melt away"

**Dali Oberon5 5.1 £1699****Best speaker package £1500-£2000, Awards 2023 ★★★★★**

These are clever performers: lean, attractive, interesting and unfussy. And those words stand for both the aesthetics and the acoustics.

**Size (hwd)** Centre speaker 16 x 44 x 30cm **Finishes** 4

"There's surprising authority and power to this relatively diminutive package as well..."

**Q Acoustics 5040 5.1 Home Cinema £2475****February 2024 ★★★★★**

Q Acoustics has delivered an excellent home cinema package for those who value convenience and an exciting, lively sound.

**Size (hwd)** Centre speaker 16 x 43 x 24cm **Finishes** 2

"While it doesn't always follow that a great stereo pair becomes a great surround package, that certainly is the case here"

**Bowers & Wilkins 606 & 607 S3 £2496****Best speaker package over £2000, Awards 2023 ★★★★★**

We are taken aback by how good this package sounds as a whole. Clear, detailed, rich and dynamic – this speaker system ticks all of our boxes.

**Size (hwd)** Centre speaker 16 x 48 x 25.5cm **Finishes** 3

"If you have the space, then you should consider opening your home to this outstanding KEF package"

**Wharfedale Evo 4.4 5.1 £2799****Best speaker package over £2500, Awards 2022 ★★★★★**

Large it may be, but packed as it is with sophisticated speaker technology, we think the Evo 4.4 5.1 system represents superb value for money.

**Size (hwd)** Centre speaker 25 x 75 x 35cm **Finishes** 3

"It immediately prompts us to question whether there is any need for Dolby Atmos"

**ATC C1 5.1 £3595****Awards 2016 ★★★★★**

We'd like a bit more authority in the bass, but we're delighted by the detailed, agile sound, focused surround steering and power on offer.

**Size (hwd)** Centre speaker 16 x 41 x 28cm **Finishes** 2

"For small to medium-sized rooms, we can think of no better alternative"

**PMC Twenty5.23 5.1 £10,290****Best speaker package over £5000, Awards 2019 ★★★★★**

Analytical and fun in equal measure, this gorgeous PMC system – also our current reference speaker package – is entirely worth the high asking price.

**Size (hwd)** Centre speaker 17 x 55 x 31cm **Finishes** 4

"The greater insight and texture make this one of the most lifelike reproductions of the human voice at this price"

**VIDEO STREAMERS**

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**Amazon Fire TV Stick 4K £50****Best video streamer under £100, Awards 2020 ★★★★★**

Despite some caveats, this 4K device supports all HDR formats and delivers excellent picture quality for a very affordable price.

**Resolution** 2160p, 1080p, 720p **Storage** 8GB **4K** Yes**Google Chromecast with Google TV £60****Best video streamer under £100, Awards 2023 ★★★★★**

With a new remote and super-smart UI, Google's latest Chromecast video streamer is the complete package.

**Resolution** Up to 4K HDR, 60fps **Storage** n/a **4K** Yes**Apple TV 4K £169****Best video streamer over £100, Awards 2023 ★★★★★**

It has a fantastic UI and design, a huge library of 4K HDR content, and the best picture and sound performance at any price. Siri is useful, too.

**Resolution** 2160p, 1080p, 720p **Storage** 8GB **4K** Yes

£1000 to £3000

£3000 and above

Up to £100

£100 and above

**Sony PlayStation 5 £450**

Online ★★★★★☆

The PS5 has some unexpected tricks up its sleeve that make it feel like a real generational upgrade - and there's a cheaper option without discdrive.

**Resolution** 4K, 120fps **Storage** 825GB SSD



**XBox series X £449**

Online ★★★★★☆

It feels more like a refinement than a true generational leap, but the Xbox Series X is still an excellent 4K gaming machine.

**Resolution** 4K, 120fps **Storage** 1TB SSD



TELEVISIONS

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**LG OLED42C3 £1199**

**Best 40-43in TV and Best gaming TV, Awards 2023 ★★★★★**

It's only marginally better than the C2 it replaces - but that is still good enough for the OLED42C3 to be the best 42-inch TV we have tested.

**Type** OLED **HDMI** 4 **Resolution** 4K **Operating system** webOS23



"It is much easier to get the C3 looking its best than it is most other TVs"

**Amazon Fire Omni QLED £450**

**Best budget 48-50in TV, Awards 2023 ★★★★★**

Budget TVs are hard to get right, but the 50in Omni QLED succeeds thanks to a consistent, considered performance and impressive feature set.

**Type** QLED **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"A surprisingly consistent and considered performer that provides a very satisfying and authentic picture"

**LG OLED48C3 £1199**

**Best premium 48-50in TV, Awards 2023 ★★★★★**

To put it plainly, there's no better-specified TV available at this size. And it delivers crisp, well-defined pictures with awesome contrast.

**Type** OLED **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"The inky blacks of OLED plus the C3's particularly bold approach make for an image that's packed with punch"

**Philips 55OLED808 £1399**

**March 2024 ★★★★★**

The effort that Philips has put into this TV is clear to see: if you're in the UK and in the market for a new mid-range OLED, you simply must consider this set.

**Type** OLED **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"Fascinating dystopian vistas are rendered with depth-enhancing solidity, but without any realism-busting exaggeration"

**Sony XR-55A80K £1499**

**February 2023 ★★★★★**

Everything about the A80K feels like the result of a true labour of love - which means we love it too. Beautiful, refined pictures, and impressive sound.

**Type** OLED **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"Pictures are typically exquisite, for want of a better word"

**Sony XR-55X90L £1599**

**September 2023 ★★★★★**

If your budget won't stretch to an OLED, this is a superb option that delivers consistently cinematic and cinematically consistent results.

**Type** LCD **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"Everything we watch over days of testing is beautifully detailed and sharp"

**Philips 55OLED907 £1999**

**May 2023 ★★★★★**

While it is certainly expensive for a 55-inch TV, its pictures rock and its impressive sound largely negates the need for a soundbar.

**Type** OLED **HDMI** 4 **Resolution** 4K **ARC/eARC** eARC



"Another huge attraction of the 55OLED907's pictures is how refined they look"

**Sony A80L (XR-55A80L) £2399****Best premium TV 55in and larger, Awards 2023 ★★★★★**

With its deeply impressive ability to combine the spectacular and the subtle, the A80L more than holds its own against rivals with fancier panel technology.

**Type** OLED **HDMI 4 Resolution** 4K **ARC/eARC** eARC**PRODUCT OF THE YEAR**

"All of these qualities combine to make an image that is brilliantly solid with a lovely three-dimensional feel."

**TCL 65C845K £849****Best budget TV 55in and larger, Awards 2023 ★★★★★**

Sees TCL bringing to Europe the combination of aggressive pricing and excellent performance that made the brand so successful in the US.

**Type** QLED **HDMI 4 Resolution** 4K **ARC/eARC** eARC**AWARD WINNER**

"Its pictures really do jump off the screen with an intensity far beyond anything else we have seen at the same price"

**Sony X95L (XR-65X95L) £2199****October 2023 ★★★★★**

Sony's improved light control takes everything from black levels and contrast to colour and even detail consistency to another level.

**Type** MiniLED LCD **HDMI 4 Resolution** 4K **ARC/eARC** eARC

"Takes Sony's Mini LED picture quality to a gorgeous new level that gives even OLED TVs plenty to worry about"

**LG OLED65C4 £2700****June 2024 ★★★★★**

A surprisingly large upgrade on the uncharacteristically dull C3 of last year, the C4 has laid down the gauntlet for its rivals in dramatic fashion.

**Type** OLED **HDMI 2.1 4 Resolution** 4K **ARC/eARC** eARC

"The C4 springs into life, delivering a bright and vibrant yet balanced picture that is crisp but clean"

**Panasonic TX-65MZ2000B £2999****February 2024 ★★★★★**

Panasonic has managed to give its superb OLED flagship an MLA-powered brightness boost without diminishing its accuracy or authenticity.

**Type** MLA OLED **HDMI 4 (2 x HDMI 2.1) Resolution** 4K **ARC/eARC** eARC

"Equally as impressive is the amount of detail that the MZ2000 digs up in the brightest parts of the picture"

**Philips 65OLED937 £3199****April 2023 ★★★★★**

From Ambilight-enhanced design to ground-breaking pictures and class-leading sound, this may be the most all-round spectacular TV we have seen.

**Type** OLED **HDMI 4 Resolution** 4K **ARC/eARC** eARC

"The 65OLED937 manages to look exceptionally sharp and detailed with both native 4K and upscaled HD footage"

**Sony A95L (XR-65A95L) £3699****January 2024 ★★★★★**

With super-bright content, the A95L will knock your socks off; with everything else, it's merely superb – and it sounds great for a TV, too.

**Type** QD-OLED **HDMI 4 (2x HDMI 2.1) Resolution** 4K **ARC/eARC** eARC

"We have put this Sony up against pretty much every other TV you might be considering; it is, with very little doubt, the best of the lot"

**LG G3 (OLED65G3) £3500****June 2023 ★★★★★**

The first OLED TV to feature Micro Lens Array (MLA) technology is a dazzling upgrade on the already excellent TV it replaces.

**Type** MLA OLED **HDMI 2.1 4 Resolution** 4K **ARC/eARC** eARC

"The G3's greater brightness capabilities become even more obvious as you move up the picture presets"

**Samsung QE65S95D £3599****June 2024 ★★★★★**

Samsung's third-generation QD-OLED is a superb TV that ups the technical ante while simultaneously improving balance and consistency.

**Type** QD-OLED **HDMI 2.1 4 Resolution** 4K **ARC/eARC** eARC

"The first thing that hits you is how bright it is. Not just by OLED TV standards, but by the standards of any current mass-market TV technology"

**Samsung QN900D £6500****July 2024 ★★★★★**

The QN900D rewrites the upscaling rule book to remind us in no uncertain terms that 8K TVs don't have to be fed 8K content to make a difference.

**Type** QLED Mini LED **HDMI 2.1 4 Resolution** 8K **ARC/eARC** eArc**NEW ENTRY**

"The precision with which it adds the tens of millions of extra pixels required to turn 4K and HD into 8K feels almost mystically impressive"

50in to 60in

65in and above

8K TV

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BUYER'S GUIDE

**BEST BUYS**

The only products worth considering

# PORTABLE HEADPHONES

BIN THE BUNDLED BUDS AND INVEST IN BETTER SOUND

View offers [whf.cm/BBHeadphones](https://whf.cm/BBHeadphones)

In-ears up to £250

## SoundMagic E11C £50

Best wired in-ear headphones under £100, Awards 2023 ★★★★★

The latest version of Soundmagic's budget in-ears continues to impress with a full-bodied, energetic and informative sound.

In-line controls Yes Cable length 1.2m



## Beyerdynamic Soul Byrd £69

April 2019 ★★★★★

You'll struggle to find a better pair of in-ear headphones costing less than £70 than these Beyerdynamics.

In-line controls Yes Cable length 1.2m



## Klipsch T5M Wired £70

Best wired in-ear headphones £50-£100, Awards 2021 ★★★★★

Not only do they have some of the most comfortable tips around, but these T5M Wires also show a maturity that's rare at this price.

In-line controls Yes Cable length 1.3m

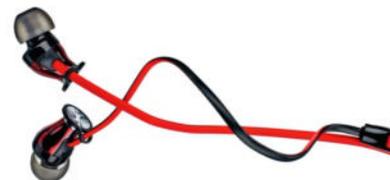


## Sennheiser Momentum M2 IEi £70

Best in-ears £50-£100, Awards 2017 ★★★★★

You wouldn't think anything so small could sound quite so good – not for just £70. But they are wonderfully smooth, expressive and balanced.

In-line controls Yes Cable length 1.3m



## Shure Aonic 3 £190

Best wired in-ear headphones over £100, Awards 2023 ★★★★★

Breathtakingly musical and comfy to wear, the Shure Aonic 3s set a new benchmark for in-ear headphones at this level.

In-line controls Yes Cable length 1.2m



On-ears up to £150

## Austrian Audio Hi-X15 £99

Best wired on-ear headphones under £100, Awards 2023 ★★★★★

An analytical pair of headphones, but they still manage to make music entertaining – they extract bags of detail but keep the soul of your music intact.

Type Closed Connection 3.5mm Weight 255g



## Grado SR80x £130

Best wired on-ear headphones £100-£200, Awards 2022 ★★★★★

Grado hasn't torn up its own rulebook and revolutionised its legendary headphones. At this money, the SR80 model remains the best in the market.

Type Open Connection 3.5/6.3mm Weight 240g



## Røde NTH-100 £149

Best wired on-ear headphones £100-£200, Awards 2023 ★★★★★

The Røde NTH-100 outperform our previously high expectations comfortably; if you can live with a long cable, they are outstanding value.

Type Closed Connection 3.5mm Weight 350g



**Austrian Audio Hi-X50 £199**

May 2021 ★★★★★

If you're looking for well-designed wired on-ear headphones for portable or domestic use, these Austrian Audios should be at the top of your shortlist.

**Type** Closed **Connection** 3.5mm **Weight** 285g

**Beyerdynamic DT 700 Pro X £219**

April 2022 ★★★★★

Beyerdynamic might officially be aiming the DT 700 Pro X at content creators and producers, but we think they are a great option for music fans, full stop.

**Type** Closed **Connection** 3.5mm **Weight** 350g

**Grado SR325x £330**

Best wired on-ear headphones over £200, Awards 2023 ★★★★★

Successors to our 2020 Award winners prove that evolution is a more reliable way of making things better than headline-grabbing design revolution.

**Type** Open **Connection** 3.5mm/6.5mm **Weight** 340g

**Beyerdynamic Amiron £415**

Best wired on-ear headphones over £400, Awards 2022 ★★★★★

Beyerdynamic has produced a pair of headphones that sound as good as they feel. Be careful though; their open-backed nature leaks sound.

**Type** Open **Connection** 3.5mm/6.3mm **Weight** 340g

**Grado RS1x £800**

November 2022 ★★★★★

Four generations in, the top Reference Series model is more entertaining (and exotic) than ever before.

**Type** Open **Connection** 3.5mm/6.3mm **Weight** 320g

**Beyerdynamic T1 (3rd Generation) £899**

February 2021 ★★★★★

The latest T1 over-ears are a step up in performance and compatibility from their predecessor; among the best headphones at this price.

**Type** Open **Connection** 3.5mm/6.3mm **Weight** 360g

**Sony MDR-Z1R £1650**

April 2017 ★★★★★

The finest closed-back headphones we have heard. Feed them with quality electronics and there is no doubt the Z1Rs will shine.

**Type** Closed **Connection** 3.5mm/6.3mm **Weight** 385g

**Sennheiser HD820 £1999**

October 2018 ★★★★★

Probably the best-sounding closed-back headphones we have heard. They have lots of detail, plenty of punch and a strong bass performance.

**Type** Closed **Connection** 4.4mm/6.3mm/XLR4 **Weight** 360g

**Focal Utopia £3499**

June 2017 ★★★★★

With these cans Focal has aimed for the moon and reached it, delivering one of the finest pairs of headphones we've heard.

**Type** Open **Connection** 6.3mm **Weight** 490g

**Sony WF-C500 £59**

Best wireless earbuds under £80, Awards 2023 ★★★★★

Sony has managed to bring a lot of what makes its expensive true wireless in-ears such a success without cutting too many corners too obviously.

**Controls** Yes **Battery** 10 hours (20 hours with charging case)



On-ears £150 to £1000

£1000 and above

Wireless  
up to £200

**Sennheiser HD 250 BT £60****Best wireless headphones under £150, Awards 2022 ★★★★★**

Underestimate these headphones at your peril. Sennheiser's ultra-affordable and durable headphones do not disappoint sonically for the price.

**Controls** Yes **Battery** 25 hours**Earfun Air £55****Best wireless in-ears under £75, Awards 2020 ★★★★★**

If you're looking for inexpensive, good-sounding waterproof buds, the Earfun Air are tough to beat.

**Controls** Yes **Battery** 7 hours (35 hours with charging case)**Google Pixel Buds A-Series £99****October 2021 ★★★★★**

Everything their pricier Pixel Buds 2 provided as far as smart abilities go, but with a performance that stands up with the best in the market at the price.

**Controls** Yes **Battery** 5 hours (plus 19 hours via charging case)**Panasonic RZ-S500W £100****Best wireless earbuds under £150, Awards 2021 ★★★★★**

The RZ-S500W make for a classy debut as Panasonic's first noise-cancelling true wireless earbuds. Detailed presentation and fine noise-cancelling.

**Controls** Yes **Battery** 6.5 hours (plus 13 hours via charging case)**Sony WF-C700N £100****Best wireless earbuds £80-£200, Awards 2023 ★★★★★**

Sony adds another pair of excellent-sounding wireless earbuds to this super-competitive sector. For the money, their abilities make them a no-brainer.

**Controls** Yes **Battery** 7.5 hours (15 hours with charging case)**PRODUCT OF THE YEAR****Sony WH-CH720N £100****Best wireless headphones under £150, Awards 2023 ★★★★★**

Sony has done it again. With their pleasing build quality and punchy sound, the WH-CH720N justify their place in the market with consummate ease.

**Controls** Yes **Battery** Up to 50 hours**AWARD WINNER****JBL Live Pro 2 TWS £130****May 2023 ★★★★★**

Not shy in coming forward, especially in the lower frequencies where there is plenty of power on tap, the JBL Live Pro 2 TWS deliver a solid, robust sound.

**Controls** Yes **Battery** 8 hours (plus 22 from case)**JBL Reflect Flow Pro £160****March 2022 ★★★★★**

Putting big, bold ticks in the boxes of style and sound quality, these sport earbuds are easy to recommend, with a comfortable, secure fit.

**Controls** Yes **Battery** 10 hours (plus 20 from case)**Grado GW100x £169****July 2023 ★★★★★**

We have dubbed Grado the kings of open-back headphones. With the excellent and hugely listenable GW100x, that crown remains firmly in place.

**Controls** No **Battery** 46 hours**Sennheiser Momentum True Wireless 3 £219****August 2022 ★★★★★**

The True Wireless 3 keep the momentum going strong. Five years into the true wireless game, Sennheiser is as competitive as ever in this space.

**Controls** Yes **Battery** 7 hours (28 with case) **Noise-cancelling** Yes

**Sony WF-1000XM5 £259****Best wireless earbuds over £200, Awards 2023 ★★★★★**

If you are looking for the clearest and most detailed sonic performance on the market right now, the WF-1000XM5 produce it – by quite some distance.

**Controls** Yes **Battery** 8 hours (24 with case) **Noise-cancelling** Yes**Bose QuietComfort Ultra Earbuds £259****February 2024 ★★★★★**

History repeats itself with Bose's new flagship wireless earbuds – they nail comfort, noise-cancelling and sound quality.

**Controls** Yes **Battery** 6 hours (24 with case) **Noise-cancelling** Yes**Sennheiser Momentum 4 Wireless £300****November 2022 ★★★★★**

Highly competitive in the sound and features departments at this price, the latest Momentums keep the legacy alive despite a less luxurious appearance.

**Folding** No **Battery** 60 hours **Noise-cancelling** Yes**Bowers & Wilkins Px7 S2e2 £379****January 2024 ★★★★★**

Class-leading insight and a more compelling balance over their forebears, with a fine sense of style; the Px7 S2e are a wonderfully complete package.

**Folding** No **Battery** 30 hours **Noise-cancelling** Yes**Sony WH-1000XM5 £379****Best wireless headphones over £150, Awards 2023 ★★★★★**

Redesigning its premium noise-cancelling headphones wasn't without risk, but the Sony WH-1000XM5 are a sonic triumph.

**Folding** No **Battery** 30 hours **Noise-cancelling** Yes**Apple AirPods Max £549****Best wireless headphones over £300, Awards 2021 ★★★★★**

There's no denying that they cost a lot more than typical products in this class but, if sound quality is king, there's equally no denying that they're worth it..

**Folding** No **Battery** 20 hours **Noise-cancelling** Yes**Bowers & Wilkins Px8 £599****January 2023 ★★★★★**

Hugely capable performers that justify their price with a combination of build and sound quality that cheaper alternatives just can't match.

**Folding** No **Battery** 30 hours **Noise-cancelling** Yes**Focal Bathys £699****January 2023 ★★★★★**

Focal blends Bluetooth into its high-end headphones recipe with great success. Highly recommendable if you're after portables at this price.

**Folding** No **Battery** 30 hours **Noise-cancelling** Yes**Mark Levinson No. 5909 £999****March 2023 ★★★★★**

Perceived value may not get top marks, but sonic value certainly does – and that's really what matters. Mark our words, these headphones really wow.

**Folding** Earcups fold flat **Battery** 34 hours **Noise-cancelling** Yes**T+A Solitaire T £1200****November 2023 ★★★★★**

The most convincing wired/wireless hybrids we have heard. In a league of their own for those who prioritise convenience and sound quality equally,

**Folding** Yes **Battery** 35-70 hours **Noise-cancelling** Yes

# PORTABLE MUSIC PLAYERS

TREAT YOUR TUNES TO A DEDICATED MUSIC PLAYER

View offers  
whf.cm/BBPortableMusicPlayers

Up to £1000

## Sony NW-A55L £160

Best portable music player under £250, Awards 2020 ★★★★★

Sony hasn't carried out an update for the sake of it; the refresh is justified by squeezing more performance into a budget price than ever before.

Hi-res 32-bit/384kHz, DSD Weight 99g Storage 16GB (plus microSD)



"If you're looking for a sonic upgrade over your phone, the Sony will offer it across the board"

## Cowon Plenue D3 £279

Best portable music player under £500, Awards 2021 ★★★★★

This is a talented player that better its previous generation counterpart for detail, separation and transparency. An impressive, tiny box of tricks...

Hi-res 24-bit/192kHz, DSD 128 Weight 103g Storage 64GB



"Cowon has added Bluetooth, a volume wheel and a dual DAC to its player and released another class leader"

## Astell & Kern A&norma SR35 £799

Best portable music player, Awards 2023 ★★★★★

The A&norma SR35 may not exactly be dressed for its not-insignificant price, but there's no uncertainty over whether it performs to it.

Hi-res 32-bit/384kHz, DSD256, MQA Weight 184g Storage 64GB



"It's a very likeable presentation, with a tonal balance slightly on the rich side and a combination of power and finesse that feels mature"

£1000 and above

## Astell & Kern Kann Alpha £1099

April 2021 ★★★★★

A powerful and talented machine, we cannot fault its sonic chops. The stylish, rock-solid build is (just) small enough to take with you on your travels

Hi-res 32-bit/384kHz, DSD256 Weight 316g Storage 64GB



"Listening to downloaded hi-res music on the Kann Alpha is truly a joy"

## Astell & Kern A&futura SE180 £1399

Best portable music player over £1000, Awards 2022 ★★★★★

If you're looking for an excellent-sounding player without spending thousands, the A&futura SE180 is among the best we've come across.

Hi-res 32-bit/384kHz, DSD 256 Storage 256GB (plus 1TB via microSD)



"Another example of Astell & Kern getting the performance balance between informing and entertaining spot on"

## Astell & Kern A&futura SE200 £1799

Best portable music player over £1000, Awards 2020 ★★★★★

Astell & Kern has managed to set a new performance benchmark for the price with the A&futura SE200.

Hi-res 32-bit/384kHz, DSD 256, MQA Weight 274g Storage 256GB



"The SE200 delivers the music faultlessly. It captures fine details and dynamic fluctuations and conveys it on a crystal clear canvas"

## Headphone jargon busted

Read more at...  
www.whathifi.com/advice



**What's the difference between the various on-ear headphones? Our jargon buster explains the various types, and why you might want to choose one particular model over another**

**1.** First, the most popular headphone design: the **over-the-ear** model, also called circumaural. These cup your ears completely, usually with semi-air-tight earcups that help minimise both sound leakage from your headphones into the outside world and the intrusive effects of ambient noise.

**2.** Supra-aural or **on-ear** designs tend to be smaller and lighter than circumaural models and, as the name suggests, they sit on your ears rather than over them. Some listeners find them lighter and easier to wear for extended listening, but they do tend to allow in more sound from outside.

**3.** Available in both circumaural and supra-aural types, **closed-back** headphones are the optimum choice for cutting out external sounds altogether. They'll also deliver more bass weight than other headphone types, because the closed earcups prevent bass leakage.

**4.** **Open-back** headphones are vented designs that allow sound out through apertures in each earcup, reducing internal sound reflections and helping to create a more natural listening experience. More sound will leak out into the surrounding environment, and you'll also suffer more ambient noise intrusion.

**5.** **Semi-open** headphones, as the name implies, combine the characteristics of both closed and open-back designs. When done well, they can be a 'best of both worlds' solution, but equally, they can often fall between two stools.



# SMARTPHONES

SUPERB MUSIC AND VIDEO PLAYERS THAT MAKE PHONE CALLS TOO

View offers  
whf.cm/BBMobilePhones

## Apple iPhone 15 Pro Max £1199

Best smartphone over £500, Awards 2023 ★★★★★

A punchier picture and smoother sound make the iPhone 15 Pro Max an unparalleled portable movie and music machine.

OS iOS 17 Size (hwd) 160 x 77 x 8.3mm Storage 256GB-1TB

PRODUCT  
OF THE YEAR



"Subtle tweaks to picture and sound quality have added dynamism and refinement to a delivery that was already superb"

iOS

## Samsung Galaxy S22 Ultra

June 2022 ★★★★★

If you can deal with the average battery life, this is the new flagship Android phone to rule them all – and that's before taking into account the new S Pen.

OS Android Size (hwd) 163 x 78 x 9mm Storage 128GB-1TB



"This flagship Samsung boasts so many headline-grabbing specs, it's tough to know which one to lead with"

## Sony Xperia 1 V

September 2023 ★★★★★

This is a phone for AV enthusiasts. If you are serious about taking your movies and music on the go, you will be hard pressed to find a better alternative.

OS Android 13 Size (hwd) 165 x 71 x 8.2mm Storage 256GB/512GB



"The Sony does a good job of replicating the environment of the original recording, with its rich and natural presentation"

Android

## Sony Xperia 10 V £349

Best smartphone under £500, Awards 2023 ★★★★★

It may not offer cutting-edge specs and the camera isn't class-leading, but this is comfortably the best budget phone on the market for movies and music.

OS Android 13 Size (hwd) 153 x 67 x 8.3mm Storage 128GB + microSD

AWARD  
WINNER



"Its picture and sound performance are hard to believe when we take into account how little it costs"

## Amazon Prime Video tips, tricks and features

Read more at...  
[www.whathifi.com/advice](http://www.whathifi.com/advice)

**Whether you're a Prime professional or just thinking of signing up, you'll want to get the most out of the service. Here are a few tips and tricks on how to do exactly that.**

### Setting up a 'Household' account

Amazon Prime Video will recommend content based on your viewing history - but what if you're really into crime thrillers, your other half loves romantic comedies and the kids love cartoons? The answer is by linking together two Amazon accounts that will both have access to Prime Video. Go to Your Account > Shopping Programmes > Amazon Household. There you can add another adult or profiles for children, and then click 'Create Household'.

### Parental Controls

You can set up a four-digit PIN on the web by going into the 'Settings' of the Prime Video section and also in the mobile app's settings.

### Streaming Ultra HD video

On Amazon's TV app there's a category populated with Ultra HD content. You can also search for '4K' or 'Ultra HD' in the search bar.

However, the results might not be complete - you can tell for sure if a TV show or movie is 4K only by clicking on it. Unfortunately, if you're on a mobile device, this doesn't show up at all.

### Streaming HDR video

HDR video - and Dolby Vision on compatible televisions - is more difficult to spot than 4K. Amazon's search function is also incomplete - when typing in 'HDR' it recommends *The Man In The High Castle*, but leaves out other HDR shows. Much like finding 4K content, it's a bit trial and error - clicking on shows to see if they come up with the HDR or Dolby Vision symbol seems the best way to find out.

### Downloading shows

For those using tablets or smartphones, you can download content to your device for offline viewing. On select films and TV shows, you can tap the download arrow to save it to your device. Your offline titles can be found in the 'Download' tab in the menu at the bottom of the mobile app.

### Changing resolution

If you want to save on space, try changing the quality of the download. Go to the app's settings and click on 'Download Quality'.

There, you can switch between three tiers: Good, Better or Best. And if you want to ensure content is downloaded only over wi-fi (saving you from using up your precious mobile data), there's a toggle for that too.

### X-ray vision

X-Ray grants access to actor biographies, trivia and other information overlaid on your show. Tap anywhere on the screen on iOS, Android or Fire devices to bring it up.

### De-registering devices

Rather than allowing someone else access to your streaming service if you sell or give away your device, go into the app's settings on another device and click 'Registered devices'.



# STREAMING APPS & SERVICES

THE BEST WAY TO GET YOUR STREAMING FIX

Music apps

## Spotify from free

December 2016 ★★★★★

Its accessibility, ease of use, huge catalogue and more mature music discovery are reasons why Spotify remains at the top of the pile.

**Sound quality** Up to 320kbps Ogg Vorbis **Offline playback** Yes



## Tidal from £10/month

Best music streaming service, Awards 2023 ★★★★★

One of the few streaming services to offer lossless audio, Tidal's exclusive content and curated playlists make it stand out.

**Sound quality** Up to 1411kbps lossless **Offline playback** Yes



## Disney Plus from £7.99/month

Best video streaming service, Awards 2023 ★★★★★

This is a polished and personal streaming service that fans of Disney's output, both children and adults, are bound to enjoy.

**Resolution** Up to Ultra HD **Offline playback** Yes



Video apps

## Amazon Prime Instant Video from £5.99/month

Best video streaming service, Awards 2017 ★★★★★

With an extensive catalogue geared towards new releases as well as 4K and HDR content, this is a great service.

**Resolution** Up to Ultra HD **Offline playback** Yes



## Netflix from £5.99/month

Best video streaming service, Awards 2020 ★★★★★

Without doubt one of the most satisfying streaming services, with excellent new and original content, it runs on practically every platform available.

**Resolution** Up to Ultra HD **Offline Playback** Yes



## Sky Stream from £26/month

January 2023 ★★★★★

Provided you have a decent broadband connection, Sky Stream delivers exactly the dish-free Sky experience consumers have been waiting for.

**Resolution** Up to Ultra HD **Offline Playback** No



# TABLETS

VIDEO, GAMES AND MUSIC ON A PORTABLE SCREEN

[View offers whf.com/BBPortableMusicPlayers](https://www.whf.com/BBPortableMusicPlayers)

Up to £500

## Amazon Fire HD 8 £349

Best tablet under £150, Awards 2023 ★★★★★

There are lots of people who just need a good, affordable tablet. For those people, an Amazon Fire tablet is the obvious choice; it's also the right choice.

**OS** modified Android **Size (hwd)** 137 x 193 x 11mm **Storage** 32 or 64GB



## Apple iPad £499

Best tablet £150-£750, Awards 2023 ★★★★★

The iPad 10th Gen packs small yet meaningful upgrades into a modernised chassis, coming together to create a well-rounded and versatile tablet.

**OS** iPadOS 16 **Storage** 64GB, 256GB **Finishes** Silver, blue, pink, yellow





# ACCESSORIES

## ANALOGUE INTERCONNECTS

DON'T SKIMP ON CABLES: THEY'RE A TOP-VALUE UPGRADE

View offers  
whf.cm/BBAudioCables

### Chord Company C-Line £63/m

Best analogue interconnect under £100, Awards 2023 ★★★★★  
Few entry-level interconnects at the price come close to offering the sonic enjoyment that Chord has produced with this cable.  
**Balanced/Single-ended** Single



### QED Performance Audio 40 £40/m

Best analogue interconnect under £50, Awards 2017 ★★★★★  
Few rival interconnects are as good as this QED when it comes to detail resolution and precision. It's nicely made too.  
**Balanced/Single-ended** Single



### Chord Co ClearwayX ARAY Analogue RCA £130/m

Best analogue interconnect over £100, Awards 2023 ★★★★★  
Evolution of a well-regarded interconnect that reveals greater texture, control and dynamics from your system's performance than before.  
**Balanced/Single-ended** Single



Up to £150

## AV & HI-FI RACKS

HI-FI KIT CAN ONLY SOUND ITS BEST WITH THE PROPER SUPPORT

View offers  
whf.cm/BBAVHiFiRacks

### Atacama Elite ECO 24 £300 per shelf

November 2023 ★★★★★  
The cumulative upgrades in absolute audio quality that a rack like Atacama's Elite Eco 24 Reference offers is worth it to our minds and ears.  
**Width** 600mm **Modular** Yes **Cable management** No



"An essential luxury if you want the best support for your hi-fi system. This appealing rack is worth investing in"

### Atacama Apollo Storm 6 £390

February 2018 ★★★★★  
Another class-leading support from Atacama that's cheaper than its Award-winning sibling. It lets your kit perform at its best.  
**Width** 590mm **Modular** Yes **Cable management** No



"Want to give your system adequate support for a decent price? Atacama has you covered"

### Hi-Fi Racks Omnium8 £478

Reviewed online, 2018 ★★★★★  
Hi-Fi Racks has made the Omnium8 about as flexible as possible. You can specify everything from finish to shelf spacing and upright shape.  
**Width** 57cm **Modular** Yes **Cable management** Yes



"As configurable an equipment rack as we've come across"

### Atacama Evoque Eco 60-40 SE £600

Best equipment rack, Awards 2023 ★★★★★  
The SE stands for Special Edition, while significant improvements in the Eco 60-40's design and dampening mean it works better than ever.  
**Width** 600mm **Modular** Yes **Cable management** No



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### Tacima CS947 £35

September 2015 ★★★★★

Great value, the highlight being how well it allows for greater detail, attack and dynamics. For the price, it's a brilliant entry-level purchase.

**Type** Block **Mains filter** Yes **No. of plugs** 6



### Russ Andrews X6 £381

September 2015 ★★★★★

No matter what the source material, the X6 helps unearth a revealing well-integrated listen, allowing your kit to be as explicit as it can be.

**Type** Block **Mains filter** Yes **No. of plugs** 6



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### Edwards Audio Apprentice MM £90

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**Rega Fono Mini A2D Mk2 £110**

April 2024 ★★★★★

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Type MM Dimensions (hwd) 3 x 10 x 10.5cm



**Graham Slee Gram Amp 2 Communicator £180**

July 2018 ★★★★★

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Type MM Dimensions (hwd) 5 x 12 x 19cm



**Musical Fidelity LX2-LPS £199**

April 2018 ★★★★★

Though it's not as versatile as the Rega Mk3, the LX2 delivers a more engaging performance thanks to its open, full-bodied sound.

Type MM, MC Dimensions (hwd) 4 x 17 x 19cm



**Rega Fono MM Mk5 £220**

Best phono stage under £300, Awards 2023 ★★★★★

The secret to the Fono MM's success really comes down to its performance. Judged by sound quality, it remains the one to beat at this level.

Type MM Dimensions (hwd) 4.5 x 18 x 15cm



**Cambridge Audio Duo MC/MM £249**

July 2018 ★★★★★

This is a well-equipped MM/MC phono stage that even has a headphone output. Its sound quality is right up there in the leading pack.

Type MM, MC Dimensions (hwd) 5 x 22 x 16cm



**Moon 110LP v2 £495**

Best phono stage £300-£1000, Awards 2023 ★★★★★

The Moon 110LP v2 is certainly musically satisfying. If you're in the market for a quality affordable phono stage, this little box is well worth auditioning.

Type MM, MC Dimensions (hwd) 4.2 x 13 x 17cm



**Musical Fidelity MX-VYNL £699**

Best phono stage over £500, Awards 2019 ★★★★★

A superbly made unit, that's nice to use and, most importantly, sounds lovely. As good a phono stage as we've heard at this price.

Type MM, MC Dimensions (hwd) 5 x 22 x 22cm



**Vertere Acoustics Phono-1 MkII L £1350**

Best phono stage over £1000, Awards 2023 ★★★★★

The MkII L is clearly a step ahead, so new buyers should not hesitate to go for this version. Given a source and system of appropriate talent, it shines.

Type MM, MC Dimensions (hwd) 5.5 x 21 x 23.5cm



**Cyrus Phono Signature/PSX-R2 £2290**

May 2016 ★★★★★

Partnered with the PSX-R2 power supply and a suitably talented turntable, the Signature sounds great. It's a top-class phono stage.

Type MM, MC Dimensions (hwd) 7 x 22 x 36cm



**Burmester 100 Phono £8840**

March 2018 ★★★★★

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Best cartridge under £100, Awards 2023 ★★★★★

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Type MM Tracking weight 2.0g

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### Sumiko Rainier £160

Best cartridge £100-£250, Awards 2023 ★★★★★

This Sumiko is a little gem. Set it up with care and have a little patience, and you'll find this to be one of the best performers anywhere near this price.

Type MM Tracking weight 1.8-2.2g (2.0g recommended)

AWARD  
WINNER



"Get in some hours of use and the presentation blooms into something that's surprisingly musical and engaging"

### Ortofon Quintet Blue £359

Best cartridge over £250, Awards 2023 ★★★★★

Given a suitably capable system we have no doubt the Ortofon Quintet Blue will impress. It's a well-balanced design with no obvious weaknesses.

Type MC Tracking weight 2.3g

AWARD  
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June 2018 ★★★★★

The C-Screen possesses the fantastic ability to mirror a system's punch and drive. What it does, it does better than anything else at the price.

Single or Bi-wire Single

### QED XT25 £6/m

May 2018 ★★★★★

Features the same characteristics as the more expensive XT40, displaying the kind of transparency that's difficult for its rivals to match.

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### Atlas Equator 2.0 (2018) £7.25/m

Reviewed online, 2018 ★★★★★

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CS947, Sept 2015



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**QED Reference XT40i £11/m**

May 2020 ★★★★★

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**Single or Bi-wire** Single

**AudioQuest Rocket 11 £12.50/m**

Best speaker cable under £15/m, Awards 2021 ★★★★★

If you're looking for a flexible and transparent speaker cable, this is a great option for the price. It works well with a wide range of systems, too.

**Single or Bi-wire** Both

**Chord Company Clearway X £15/m**

July 2022 ★★★★★

The cable you want is the one that degrades the music signal the least.

Judged in that way, the ClearwayX must count as a huge success.

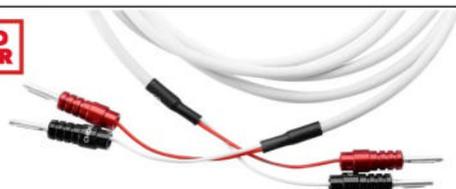
**Single or Bi-wire** Single

**Chord Company RumourX £18/m**

Best speaker cable, Awards 2023 ★★★★★

With the RumourX plumbed-in, our systems deliver a crisp, clean, dynamic presentation. We're impressed at the musically cohesive nature of the sound.

**Single or Bi-wire** Single



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[whf.com/BBSpeakerStands](https://whf.com/BBSpeakerStands)**Atacama Moseco 6 £150**

Best speaker stand, Awards 2023 ★★★★★

A speaker stand that impresses with how weighty and dynamic it allows systems to sound. Considering the price, it's something of a steal.

**Height** 60cm **Fillable** Yes **Finishes** 4 (pole), 3 (base panel)



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**Q Acoustics 20 speaker stands £200**

September 2014 ★★★★★

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**Height** 66.5cm **Fillable** No **Finishes** 2



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# HI-FI WORKOUT: DE LA SOUL'S 3 FEET HIGH AND RISING

**A**pple Music recently named Lauryn Hill's *The Miseducation Of Lauryn Hill* as the greatest album of all time, and while it wouldn't have been my personal choice (I'm more of a *Nevermind* or *The Bends* kind of guy), such accolades are so subject to the vagaries of opinion and taste that it's barely worth getting het up over. There is no one greatest album of all time, and anyone who tries to tell you otherwise is likely to have a very big tantrum over a very small issue.

So let's get it out of the way right now: this is not a dismantling of Lauryn Hill or a bid to change the rulings of yet another inane poll or ranking. Rather, it's a chance to thrust into the spotlight another gem of a hip-hop album that you may want to add to your collection as you search for your system's next treat to dive into (after you've finished Billie Eilish's latest). It is, of course, De La Soul's peerless 1989 masterwork *3 Feet High And Rising*.

You may already own this seminal record, in which case you can look smug and close your magazine. You may be a hip-hop fan who hasn't got around to it yet, or you may be a seasoned headbanger who won't countenance anything beyond Slayer and Slipknot.

Whatever the case, I urge you to give *3 Feet... a chance*. As an album to enjoy or use as a test record, it truly is one of the finest genre examples. Read enough of our product reviews and time and again you will notice the inclusion of the Long Islanders' works peppered across our pages, with the bulk of those tracks coming from this 1989 release.

## TREASURE TROVE OF HITS

De La Soul are test room staples, and *3 Feet High... is their most well-stacked treasure trove of classic hits*. Why? Well, it's beautifully constructed and put together for a start, with a soft yet clean production style that leans heavily on samples, skits and slightly off-the-wall genre incorporations. Hip-hop artists were often defiantly and understandably dogmatic in using musical styles of the same type in their mixes, but De La Soul were one of the first groups to integrate classic tracks from eclectic (and often quite traditional) bands or artists. Steely Dan on a rap record? Why not?

Such experimentation only served the quality of the tracks that resulted. When '80s hip-hop was becoming aggressive, hard-hitting (NWA, Public Enemy) and focused on a sort of encroaching materialism, *3 Feet High And Rising* felt like an oasis within a storm of angry beats and angrier lyrical polemics. Public Enemy's *It Takes A Nation Of Millions To Hold Us Back* may be great for testing bass, punch and dynamism, but the

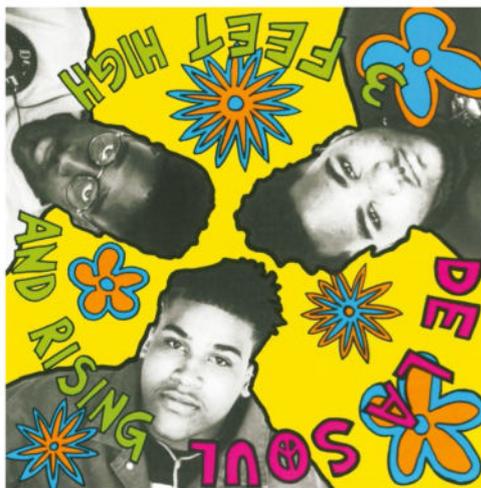
near-childlike innocence and simplicity offered by De La Soul's *The Magic Number*, say, provides a quirkier test of purity, organisation, timing and texture.

## INTUITIVE PRODUCTION

Alternative offerings have produced ample test-fodder within our hallowed halls. *Eye Know* is my personal go-to, melding that same simple, easy quality with the sort of sharp, intuitive production that really makes a track click. Nothing here is overly complex, yet the various textures and tones - soulful guitar, assertive drums and rising horn samples - combined with that effortless lyrical dexterity make it a winner. Many systems can do numerous things well, but *Eye Know* offers a change of pace and style that some will latch on to and others will utterly allow to pass by. In that sense, it's a track that speakers and set-ups either 'get' or they don't, and with a little practice, you'll quickly begin to figure out which is which.

Ultimately, for all this talk of testing, let's not forget that music was meant to be enjoyed rather than analysed, and by these parameters, *3 Feet High... only shines brighter*. Its breezy blend of soul, easy listening, funk, psychedelic and soft rock influences marry to create an album that draws you in with its charms gently rather than barreling you over with self-importance or sonic insistence, and while it may be a cliché, a warm summer night, a Bluetooth speaker (sorry, hi-fi aficionados), a chilled beverage and some soothing De La Soul will always ease the pain.

Harry McKerrell, staff writer



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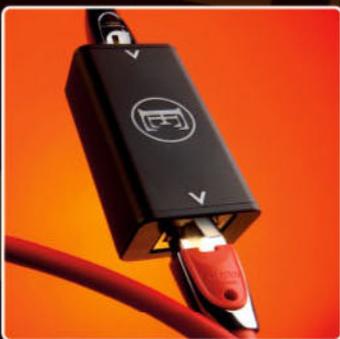
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