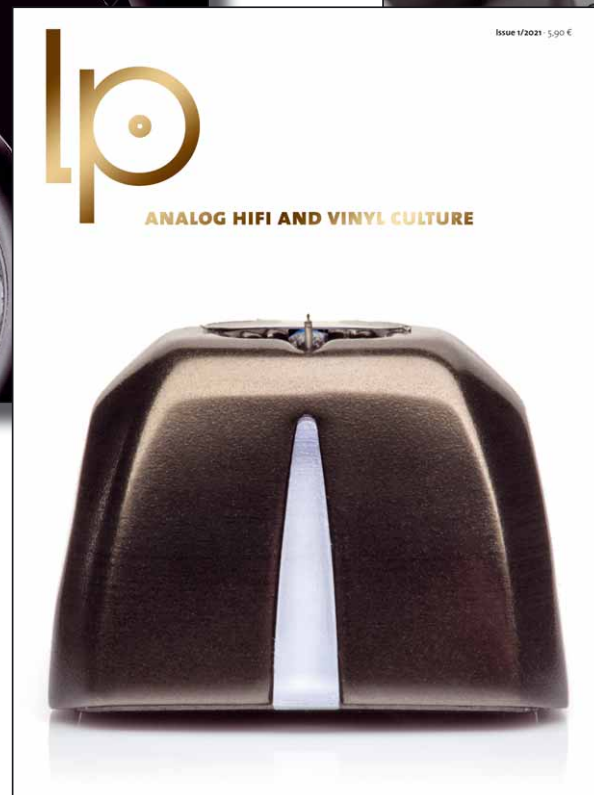


# HOME CINEMA WORLD



# READ IT !

## Movie premieres – now also at home



Our media consumption is changing, and the way we watch movies and what we watch them with is no exception. In the music area, sales of physical formats – apart from vinyl discs – have been rapidly declining for years. Instead, we are listening to music via stream using services like Spotify or Tidal. And it's not much different for movies, either. In some countries, most people still like to watch linear TV via cable, satellite, or DVB-T, but their share is getting smaller and smaller. Video streaming platforms like Disney+, Amazon Prime, and Netflix, as well as the libraries of the broadcasting stations, enjoy increasing demand and thus count ever more subscribers. The development of fast broadband internet enables more and more households to watch movies in high image quality on the Internet. In countries where digitalization has progressed fastest, hardly anybody is still watching satellite TV.

Also, the first film companies - not least because of the Corona situation - are now moving to have the premieres of their blockbusters streamed on the Internet rather than being shown in theaters. Warner Bros. announces 17 movie premieres that will take place in parallel on their streaming service HBO MAX and in theaters – if they're open. Among them are viewer magnets like Matrix 4. This is likely just the beginning. Other producers will follow Warner's lead and step up the streaming trend.

Thus, home cinema gains importance, and that's why the purchase of a good large-screen TV or projector is worthwhile. As this year's CES novelties show, TV manufacturers take account of the worldwide streaming boom, focusing on the easy and convenient usability of the various streaming platforms in their user interfaces.

Have fun in your home theater!

Dipl.-Phys. Guido Randerath



Dipl.-Phys. Guido Randerath  
Editor-in-Chief



Image: TCL

Coming soon





**26-31 OLED TV with all HDR formats**



**10-21 Zinea Movie Hall**

**10-21 Zinea Movie Hall**  
7.1.4-Dolby-Atmos Showcase Cinema

**22-25 Theatrical releases 2021 in-home cinema**  
Is home cinema becoming the new cinema?

**26-31 OLED TV with all HDR formats**  
Panasonic TX-65HZW1004 reviewed

**32-38 Playmaker: The BenQ X1300i reviewed**  
BenQ X1300i – with gaming mode

**39 Service: The Equipment Classes**

**40-44 Voice-controlled soundbar**  
Polk React: Soundbar with Alexa built-in

**46-51 Precise deep bass from a small cabinet**  
Velodyne DB-10: World's first test of the new Deep Blue subwoofer series

**52-57 Active subwoofer suitable for living rooms**  
Magnat Omega CS 12: Sophisticated, active subwoofer for HiFi and home cinema

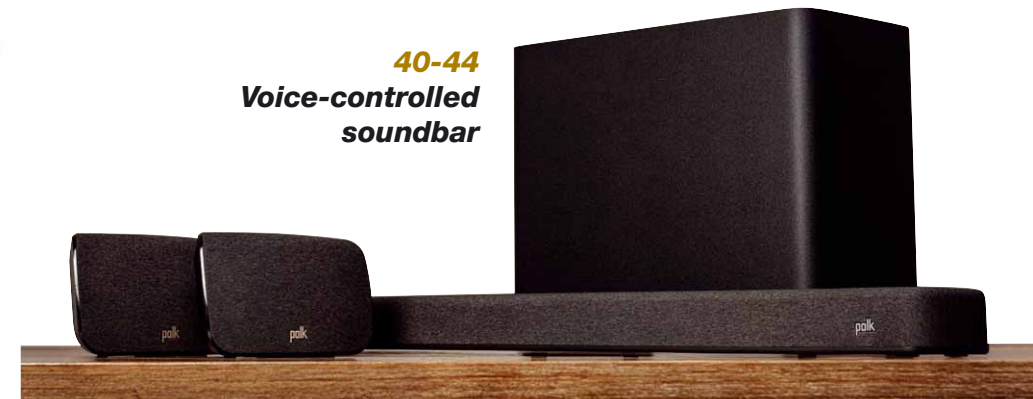
**58 Preview**

**52-57 Active subwoofer suitable for living rooms**



**32-38 Playmaker: The BenQ X1300i reviewed**

**40-44 Voice-controlled soundbar**



**All Tests**

- 26** Panasonic TX-65HZW1004
- 32** BenQ X1300i
- 40** Polk React
- 46** Velodyne DB-10
- 52** Magnat Omega CS 12

**Categories**

- 3** Editorial
- 6** News
- 39** The Equipment Classes
- 58** Coming soon
- 58** Imprint



### New Center Speaker

Canton presents the new premium 3-way active center speaker Smart Vento 5. The upscale- center speaker fits perfectly with the Smart Vento 9 floor-standing speakers and the Smart Vento 3 compact speakers. It can be used flexibly as a central position in the home theater setup. The wireless active center speaker is available for 1,500 Euros.

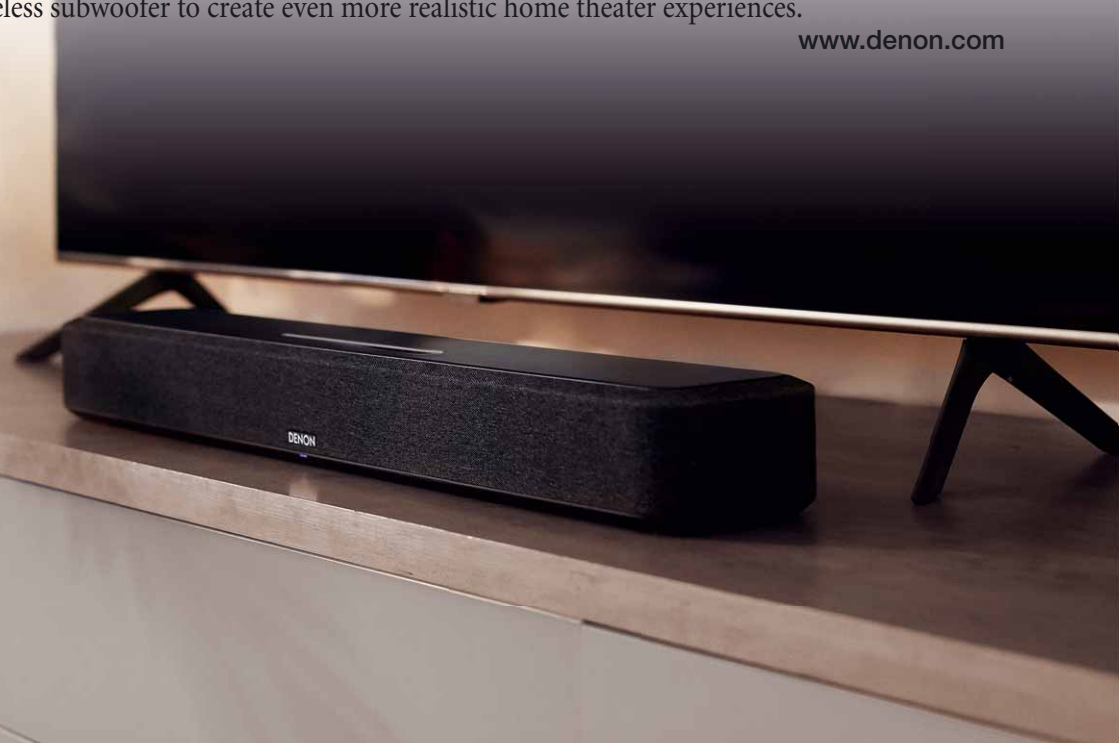
<https://www.canton.de/en/>



### Dolby Atmos Soundbar

Denon adds premium TV sound to its Home product family with the powerful, compact Soundbar 550 (around 650 Euro). Its six drivers deliver 3D surround sound in Dolby Atmos and DTS:X formats, bringing great sound to movies, series, and music. Thanks to HEOS Built-in, users can access high-resolution audio files from their favorite streaming services or local music libraries directly through the soundbar. It can also be wirelessly integrated as its own zone into existing HEOS multi-room systems, for example, with other Denon Home products. The Denon Home Sound Bar 550 can be used as a stand-alone soundbar or paired with other Denon Home speakers, such as the Denon Home 150, 250, or 350, for immersive surround sound. Fans of powerful bass have the option of connecting the DSW-1H wireless subwoofer to create even more realistic home theater experiences.

[www.denon.com](http://www.denon.com)



### Two New 4K Home Cinema Projectors from Sony – Optimized HDR Performance

Sony has announced two new native 4K home theater projectors with 4,096 x 2,160 pixels. At their heart, the „X1 for projector“ image processor is based on technology found in Sony’s Bravia TVs and is explicitly designed for projectors. The processor combines technologies for high-precision image analysis, uses and optimizes functions such as the Dynamic HDR Enhancer and Reality Creation for a home cinema image sharpness in a class of its own, Sony promises.

#### Up to 2,200 Lumens

The VPL-VW890ES laser projector delivers 2,200 lumens and has an ARC-F (All-Range Crisp Focus) lens, while the VPL-VW290ES lamp model gets a maximum of 1,500 lumens. The „X1 for projector“ is said to not only deliver far more detailed image analysis thanks to the more powerful computing power but also to take HDR optimization to a new level. The Dynamic HDR Enhancer examines every scene down to the smallest detail to achieve optimal contrast when playing back HDR content: Bright scenes are rendered brighter and dark scenes darker. The combination of laser and iris further extends the dynamic contrast and brightness range.

Sony’s „Reality Creation“ technology ensures high definition in the new projector models. Here, too, the „X1 for projector“ image processor analyzes every scene and sharpens 4K content as well as details and textures. Even content filmed in 2K or Full HD is upscaled to near 4K.

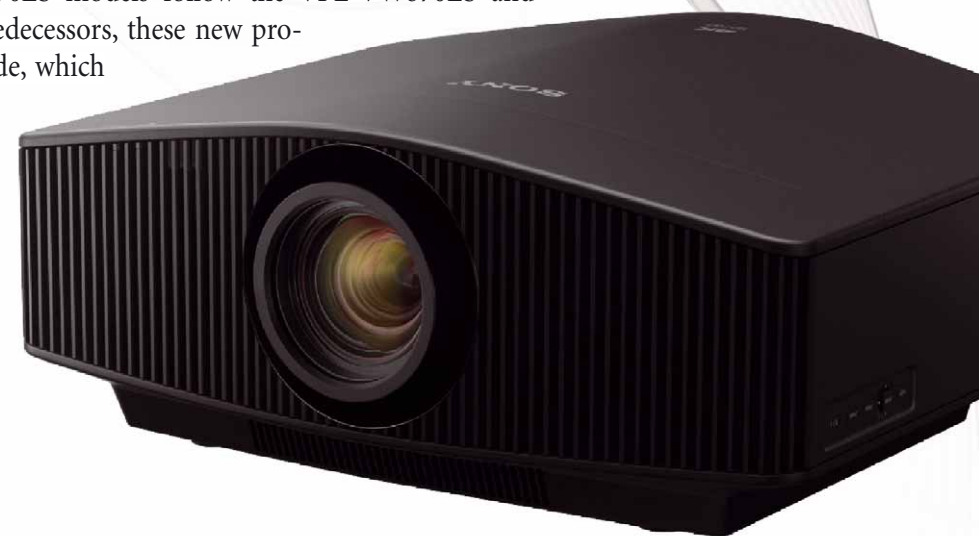
#### Lens Consisting of 18 Glass Elements

The VPL-VW890ES is also equipped with an ARC-F lens, which is said to provide pristine image quality across the entire screen from edge to edge. This fast lens consists of 18 glass elements - including six ELD (Extra-Low Dispersion) elements. This ensures optimal convergence of red, green, and blue primary colors even at the screen’s outer edges.

The new VPL-VW890ES and VPL-VW290ES models follow the VPL-VW870ES and VPL-VW270ES, respectively. Like their predecessors, these new projectors feature Input Delay Reduction mode, which significantly improves display response speed for gamers.

Sony has not yet announced market launch dates and prices.

[www.sony.com](http://www.sony.com)





## Laser Projectors

The new LG laser projectors CineBeam Forte HU810PW and Cine-Beam Forza AU810PW promise perfect entertainment at home: With 4K UHD resolution (3,840 x 2,160 px) and an image diagonal of up to 300 inches (7.62 m), they turn any room into a cinema. Both projectors have the same image technology; the Forza AU810PW brings additional premium features. The Forte HU810PW will be available from March 2021 for 3,199 Euros (RRP), while the Forza AU810PW will also be launched in March 2021 for 3,699 Euro (RRP).



[www.lg.com](http://www.lg.com)



## OLED- and Mini-LED TVs in XXL-Size

In the first half of 2021, Philips will launch new OLED- and Mini-LED models featuring the enhanced P5 processor with fifth-generation AI and advanced HDMI 2.1 functionality. In Q2, the new OLED 800 series with diagonals up to 77 inches and anti-burn-in technology will be released. Premium mini LED TVs in 65 and 75 inches will follow in the summer. They promise up to 1,500 nits peak brightness and over 1,000 dimming zones of the backlight.

[www.philips.com](http://www.philips.com)



## Affordable 4k Projector

The new ViewSonic PX701-4K bright 4K Projector is an attractive solution for both video evenings in the living room and professional presentations, even in bright meeting rooms. The PX701-4K delivers 3,200 ANSI lumens and offers UHD 3840 x 2160 resolution (XPR). Also, the new projector (around 1,000 Euro) features numerous connection options, a built-in speaker, and an effective energy-saving mode that significantly extends the life of the lamp to about 20,000 hours.

[www.viewsonic.com](http://www.viewsonic.com)



7.1.4 Dolby Atmos Showcase Cinema

# Zinea Movie Hall

The company Zinea is located in Elsterwerda, and we would like to introduce you to Zinea's showcase cinema. The exceptionally designed cinema with Dolby Atmos shines with its opulent equipment and scores with numerous technical features. Find out more about it in our report!





Company founder Roy Becker was able to fulfill a dream in the basement of his company: Here, the die-hard film fan has built an extensively equipped home theater on many square meters, which serves him as a demonstration room for his products and at the same time as a home theater for his private entertainment. The idea behind this was to offer his customers a way to experience the products he offers in action. Zinea manufactures high-quality cinema chairs designed according to the customer's wishes using the configurator on the supplier's homepage ([www.kino-sessel.de](http://www.kino-sessel.de)). Two product lines can be found here, which differ in size, features, and price.

### The Zinea Movie Hall

Becker took four weeks to plan and design the home theater and the adjacent rooms. The pure construction time was around five months. Valuable support in planning and technical execution was provided by „Heimkinoraum Leipzig“, whose team was also responsible for selecting the technical equipment. Roy Becker would like to take this opportunity to thank controlled-rooms.de from Dresden for their support. The design was a cinema in 7.1.4 Dolby Atmos configuration, whose technology has been unobtrusively accommodated in the large cinema room. In terms of appearance, warm brown and red tones dominate the home cinema. Ambient lighting and ceiling spotlights perfectly highlight the cinema chairs, which Roy Becker had custom-made according to his ideas.



Seven luxurious cinema seats on two levels make movie nights the greatest pleasure



A full-size King Kong awaits the guests of the home theater Zinea Movie Hall

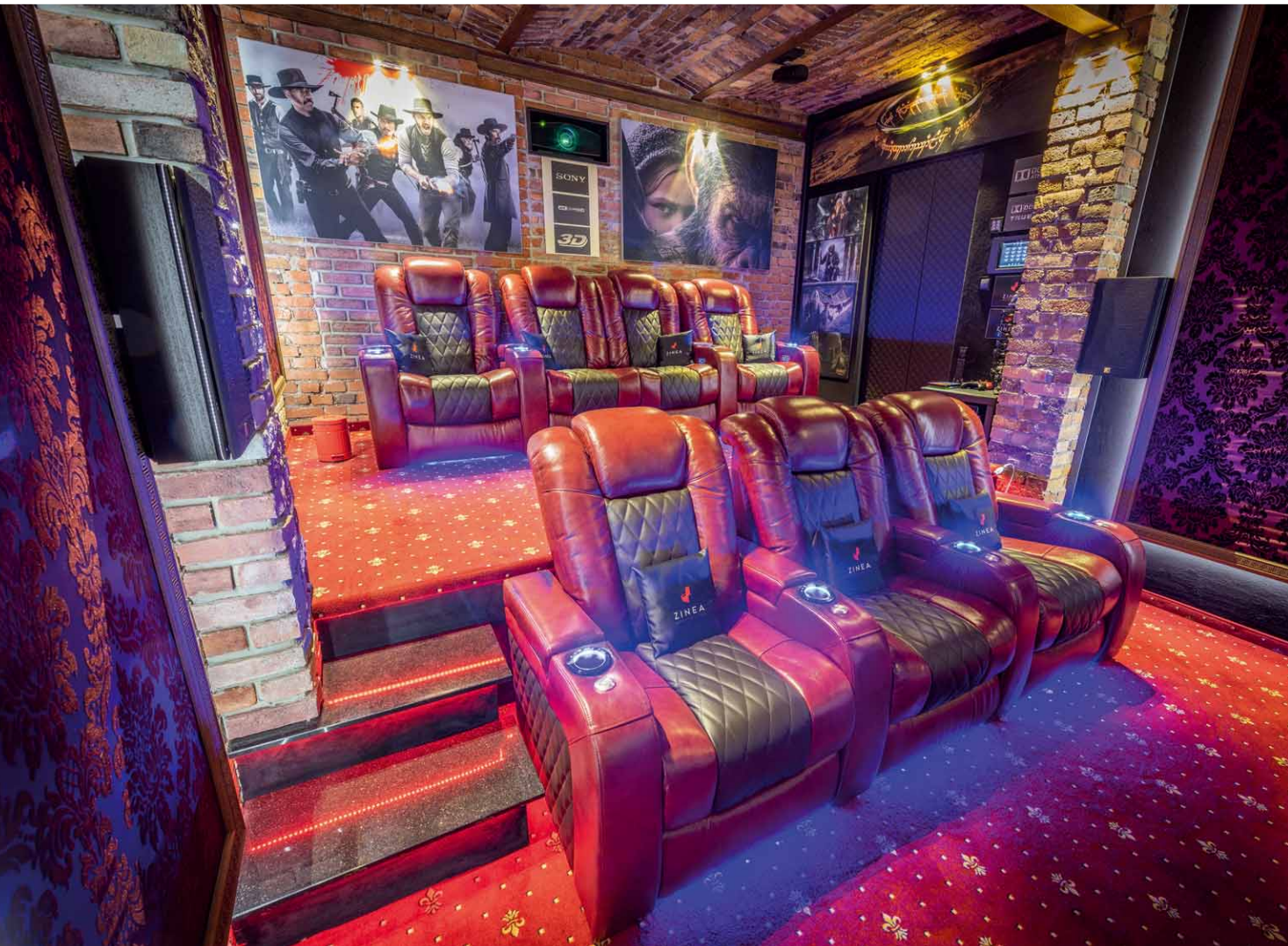
### Design

The film fan has gone all out in his home theater and already makes the entrance, hallway, and vestibule a terrific experience. Anyone who comes here immediately understands that something special awaits them. The entry with its massive wooden door is flanked by a giant King Kong, who awaits visitors to the cinema in an upright posture. After entering, guests walk across a magnificent plank floor towards a spiral staircase that leads to the cinema's basement. A second entrance to the cinema is currently under construction, which will then take interested customers by



The VPL-VW760ES 4K laser projector sits in the cabinet and casts its stunning image onto the big screen





The flat wall speakers on the sides are hardly noticeable. The rear speakers are hidden in the image absorbers on the left and right of the projector.



The large landing houses most of the technology as well as the active ventilation and heating system



elevator directly from the company exhibition hall to the cinema. Once downstairs, visitors arrive in the long hallway.

Already visually, this home theater is a stunner: The vaulted cellar made of bricks, the stone floor with a long red carpet, and the framed movie posters on the right and left along the hallway, including oversized movie characters here and there, make the hearts of all movie fans beat faster. At the

end of the hallway, movie figures, collectibles, and many Blu-rays and UHDs are nicely staged in niches. Right at the home theater entrance is a large popcorn machine on a rustic tin cabinet filled with drinks and treats. Darth Vader and the sign „Movie Hall“ point the way. Under a vaulted arch, it's a step down through the two-panel movie theater door, which opens and closes electrically at the touch of a button. The cinema itself impresses with its ceiling height of

Truly impressive: the vaulted cellar is equipped with numerous film memorabilia and movie posters



Darth Vader and the sign „Movie Hall“ point the way to the home theater

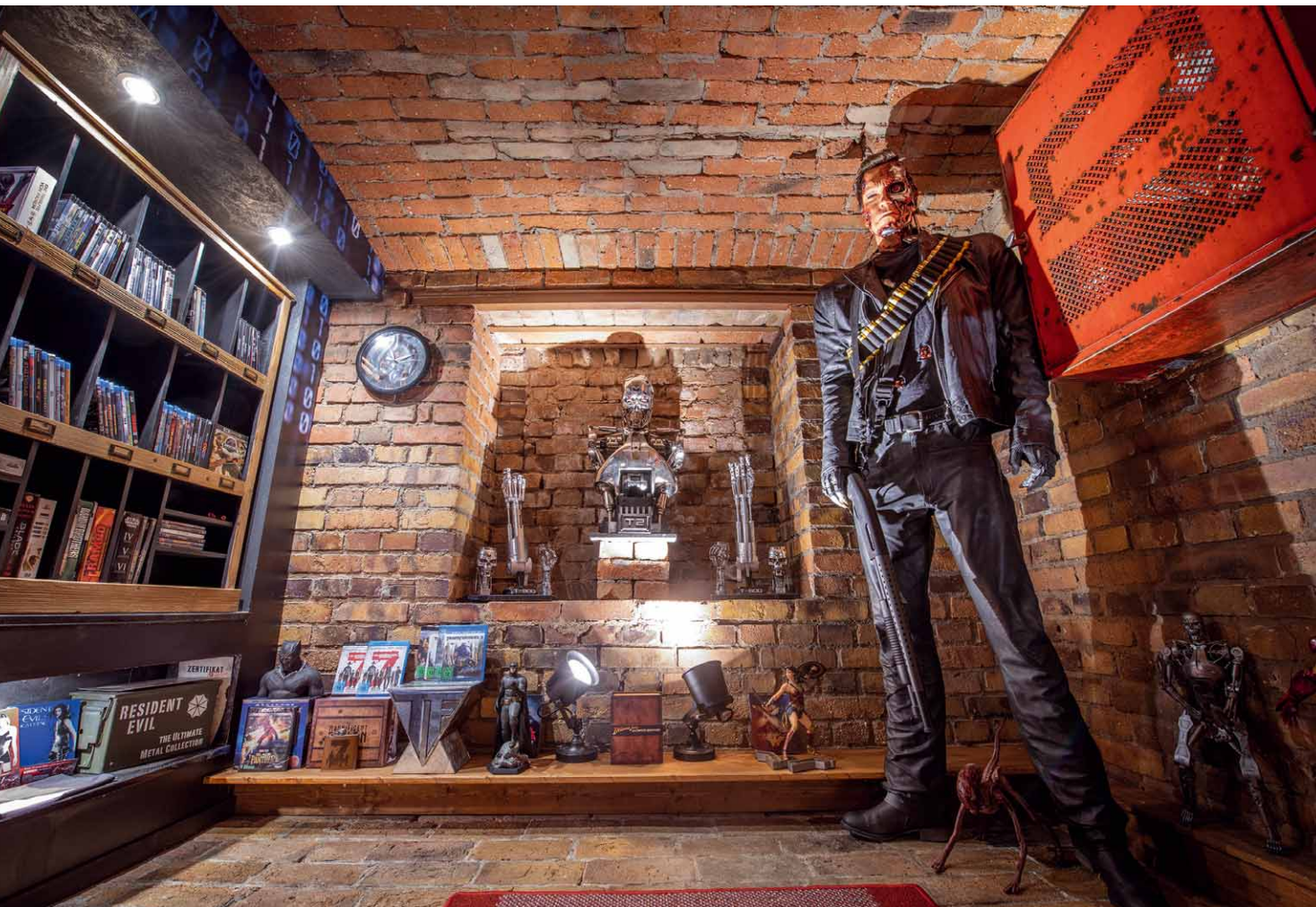
4.30 m, making it seem exceptionally spacious. It is lavishly furnished and looks very classy due to the materials used.

### Equipment and Technology

At the top of the massive pedestal is a second-row 4-chair combination. Three illuminated steps lead down to the three cinema chairs in the first row with the center reference seat. Sony's VPL-VW760ES 4K laser projector casts its stunning images onto Hollywood Screens' iMasque3 Reference electrically maskable 16:9 frame screen with a viewing area of 365 x 205 centimeters. The Zinea Movie Hall is amply equipped with playback devices: There's the HMedia Q10 Pro 4K, a Sky Q receiver, an Apple TV 4K, an Xbox One X, and the Oppo BDP-103 Blu-ray player. The center of the action is the Yamaha RX-A 3070 AV receiver with an



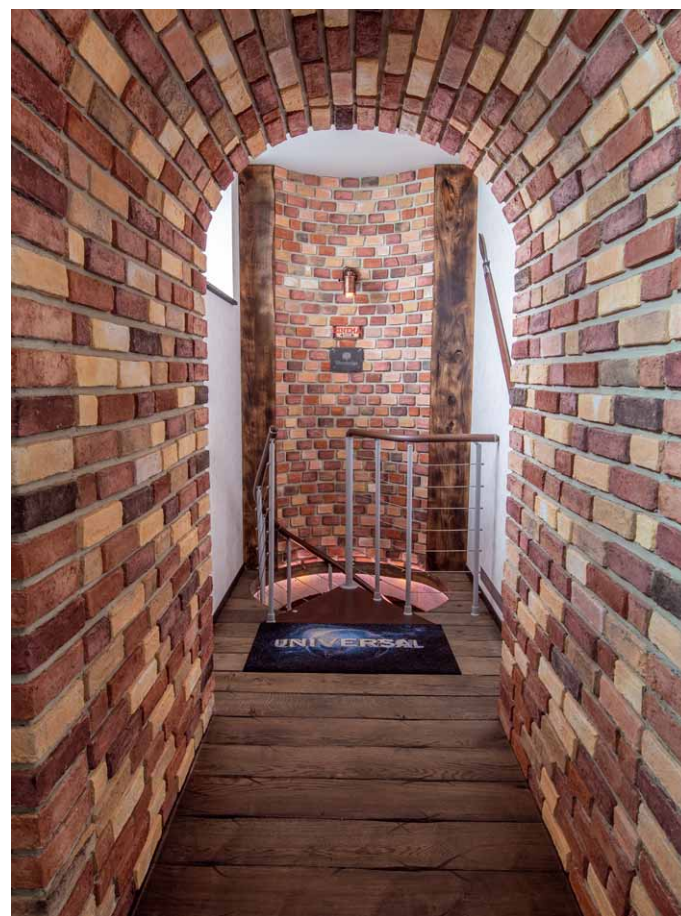




At the end of the hallway, movie characters, collectibles, and a whole lot of Blu-rays and UHDs are nicely staged in niches

additional power amplifier that makes the 7.1.4 configuration possible. Another amplifier supplies the power for the three Ibeam structure-borne sound transducers under the armchairs in the first row of seats. Audio reproduction is handled primarily by speakers from Dali, supplemented by a pair of in-wall speakers from TDG Audio. The SVS SB-2000 is used as a subwoofer. The devices, most of which are housed in the pedestal, are commanded using the RTI Controller and the associated RTI T2x remote control. All components, including lighting, are integrated into the RTI system, various lighting and media scenarios are pre-programmed.

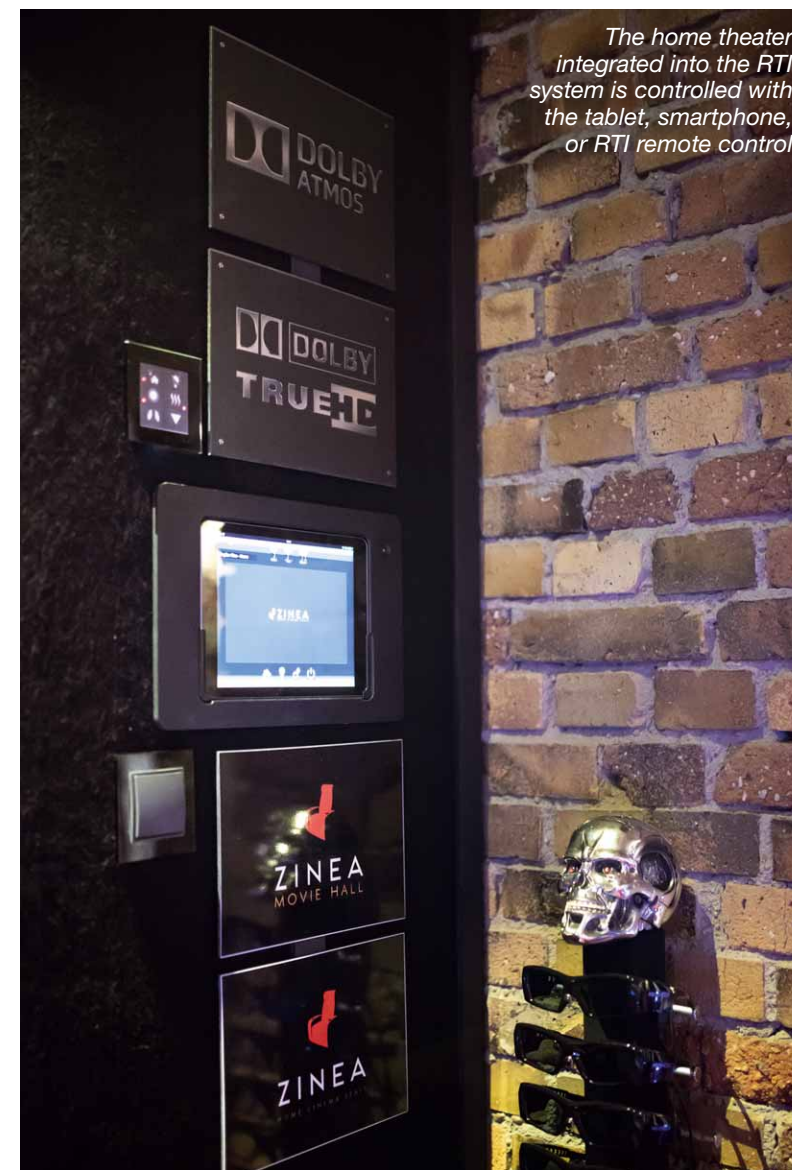
Of course, the home theater can also be controlled via iPad or iPhone. Vicoustic Wavewood absorbers are installed on the side walls at the front of the room on the left and right.



cm viewing width and optional masking, immersion in film worlds is effortless. The Zinea cinema chairs in a „two-tone look“ with all the comfort features that customers can order are the biggest highlight, of course. The chairs can be motorized into the reclining position and back again, offering perfect adaptability of seating comfort thanks to electric lumbar and headrest adjustment. The cinema chairs are controlled via the touch fields on the cupholders, equipped with ambient lighting. To enhance the movie experience, the three front seats are fitted with structure-borne sound transducers from Ibeam.

### Conclusion

Film fans should definitely look at the luxuriously equipped Zinea Movie Hall home theater, which looks very classy thanks to the materials. It's great that visitors can experience the high-quality cinema chairs for themselves and indulge in the seating comfort.



The home theater integrated into the RTI system is controlled with the tablet, smartphone, or RTI remote control

### Equipment:

- Screen Hollywood Screens iMasque3 Reference, 16:9, q365 x 205 cm visible image, electrically maskable
- Projector Sony VPL-VW760ES
- Media Player HMedia Q10 Pro 4k, Sky q Receiver, Apple TV 4K
- Blu-ray Player Oppo BDP 103
- Gaming console Microsoft Xbox One X
- AV receiver Yamaha RX-A 3070
- Stereo amplifier Ib Lautsprecher PA2100, Reckhorn A409
- Loudspeakers 1 x Dali Zensor (Center), 2 x Dali Opticon LCR (Surround), 4 x Dali Fazon Sat (Decke), 2 x Dali Phantom S-180 (Front), 2 x TDG Audio NFW-62 (Back)
- Subwoofer SVS SB-2000
- Remote control RTI T2x
- Smart Home RTI System, RTI Controller
- Absorbers Vicoustic Wavewood Absorber Wenge (front left and right), 4 x frames with acoustic fabric and damping (side), 2 x image absorber insulation (rear)
- Special features Ibeam (3 x front row of seats), 8x 3D glasses Hi-Shock black Diamond, IDock Air horizontal format docking station wall for iPad, RTI System controllable via RTI T2x, iPad and iPhone, Starry sky
- Cinema chairs Zinea Customized Genuine leather home theater chair in two-tone look, electronic recliner function, electronic lumbar support adjustment, electronic headrest adjustment, operation via the touch-field of the cupholder, LED cupholder and ambient lighting



Out into the Shire: the photograph from inside the hobbit house has a convincing three-dimensional effect





The room height of 4.30 m creates a marvelous atmosphere in the home theater

### Your cinema in the magazine!

Do you also want to present your cinema project in HOME CINEMA WORLD? Then please send us an e-mail with a short description and ideally already some photos to [randerrath@brieden.de](mailto:randerrath@brieden.de)



# World premiere Home cinema releases 2021

## Is home cinema becoming the new cinema?

Many cinema highlights from Disney, Sony, Universal, Warner, etc., are coming to home theaters first in 2021!



With "Dune," Oscar nominee Denis Villeneuve ("Arrival," "Blade Runner 2049") is bringing the adaptation of Frank Herbert's groundbreaking bestseller of the same name to the big screen and home theaters this fall. "Dune" tells the gripping story of brilliant young hero Paul Atreides, whom fate has destined for a role he never dreamed of. To secure the future of his family and his entire nation, Paul must travel to the most dangerous planet in the universe. Only in this world exists a precious resource that could allow humanity to reach its full spiritual potential. But sinister forces want to seize control of the precious substance. A fierce battle breaks out, which only those who conquer their fears will survive.

Image: Warner Bros. Pictures, Legendary Pictures

Many cinemas around the world are closed. Blockbusters that have already been shot, such as the new James Bond movie, are on hold, and movie premieres are being postponed time and time again. As a result, the major film studios are increasingly looking for other ways to bring their productions to audiences and recoup the immense production costs. The solution is obvious: Instead

of in theaters, film premieres are increasingly taking place via streaming services. Many global film premieres are thus shifting from theaters to home theaters! While this is a bitter pill for the already stricken cinema operators, it makes home cinema enthusiasts happy. And even if the cinemas reopen partially, the premieres will also take place simultaneously in the Internet, according to the announcements.

### Where?

Last year, Universal was the first studio to announce that it would be releasing current movies also in streaming. Disney, Warner Bros., and Sony soon followed suit. Disney and Warner have the advantage of already having their streaming services, Disney+ and HBO Max, up and running. Warner's HBO Max is currently only available in the US, but the company has already announced that it will

make the service available in Europe in the second half of the year. Other movie premieres are available on the relevant VoD providers such as Amazon Prime or Netflix, in some cases for an additional fee.

### What?

Disney+ has already released the films Artemis Fowl, Mulan, and Soul. The animated adventure Raya and the Last Dragon will soon be released there, as will Big Shot in April and Peter Pan & Wendy, also expected in 2021.





Walt Disney Animation Studios presents the epic adventure “Raya and the Last Dragon” in March on Disney+, set in the magical world of Kumandra, where long ago, humans and dragons lived together in harmony. But when an evil force threatened the land, the dragons sacrificed themselves to save humanity. Now, 500 years later, evil has returned, and it’s up to lone warrior Raya to find the legendary last dragon and save the broken land and its divided people.

Image: Disney



Warner Bros. Pictures and Legendary Pictures bring the long-awaited clash of two monstrous icons in March with “Godzilla vs. Kong,” directed by Adam Wingard. In “Godzilla vs. Kong,” the mythical opponents engage in a spectacular battle in which nothing less than the fate of the entire world is at stake.

Image: Warner Bros. Pictures, Legendary Pictures

Warner has already announced 17 movie premieres on HBO Max for this year (see table). In addition, there are numerous other premieres on Amazon, Netflix, Maxdome, Sky, and the like. Prince of Zamunda 2, for example, will launch on Amazon Prime in March.

However, streaming premieres have not been announced for all the new blockbusters. According to previous announcements, the latest James Bond “No Time to Die” will initially be released exclusively in cinemas. After the film’s release has already been postponed several times, April 2, 2021, is now set for the US’s theatrical premiere. We’ll see if that’s the case or if MGM decides to make the finished agent flick available for streaming soon.

### How?

You need a subscription to the respective service and the appropriate app on a suitable player to enjoy movie premieres via streaming in your living room or home theater. With new smart TVs, the popular streaming services are usually pre-installed, or the required app can be easily installed from the respective app store. If your TV (or projector) does not support a particular service, a low-cost streaming stick via USB can remedy the situation.

### Conclusion

The HOME CINEMA WORLD editorial team is sure: Bringing movie premieres to the Internet is not just a temporary side effect of the Corona pandemic. This trend will intensify and take hold. The first big blockbusters like Matrix 4 will already premiere in home theaters this year. And in the future, movie premieres exclusively in the movie theater will be the exception. The home theater will be the new cinema!

## Warner Film premieres on HBO Max 2021:

January:	The Little Things
February:	Judas and the Black Messiah, Tom & Jerry: The Movie
March:	Godzilla vs. Kong
April:	Mortal Kombat
June:	The Conjuring: The Devil Made Me Do It, In the Heights
July:	Space Jam: A New Legacy
August:	The Suicide Squad 2
September:	Malignant, The Many Saints of Newark
October:	Dune
November:	King Richard
December:	The Matrix 4
Still without date:	Cry Macho, Reminiscence, Those Who Wish Me Dead



Panasonic TX-65HZW1004 in the test

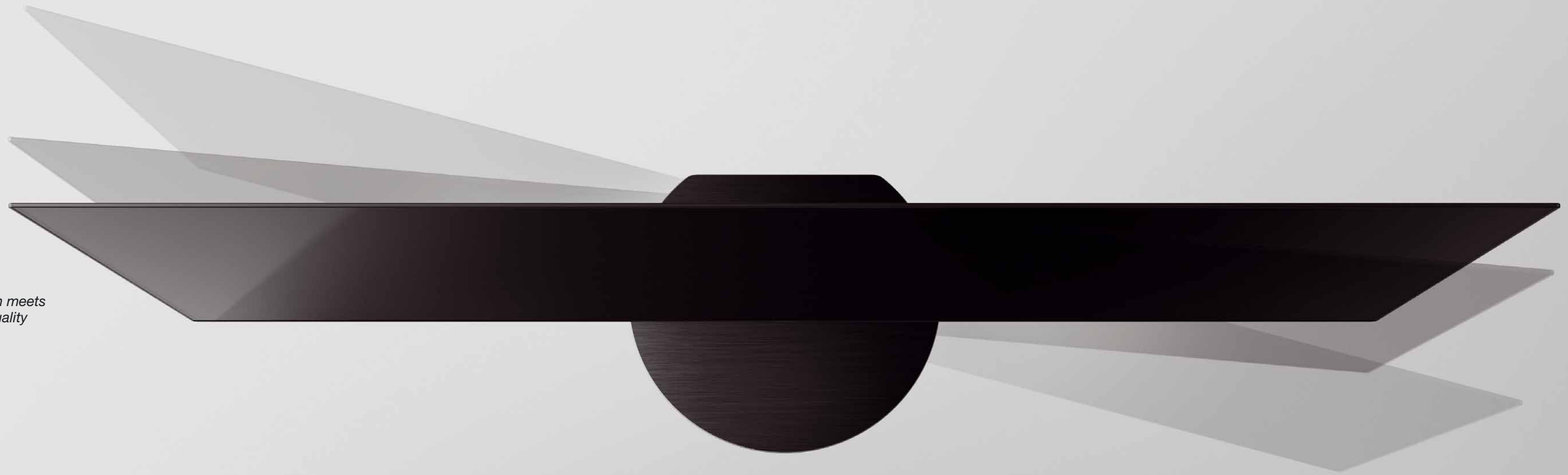
# OLED TV with all HDR formats

The 1004 TVs are Panasonic's second-highest OLED series. Their picture quality is already on an absolute reference level.





*Elegant slim design meets  
fabulous picture quality*



Panasonic was one of the first manufacturers whose TVs could handle all standard HDR formats, primarily the two dynamic formats, HDR10+ and Dolby Vision. The 65HZW1004 even goes one step further and offers Dolby Vision IQ. An optical sensor registers the ambient light and optimizes the HDR reproduction for the prevailing light conditions. The Filmmaker mode is also on board, ensuring a true-to-life reproduction and renders movies the way the creators intended. Similarly, the Netflix Calibrated Mode guarantees that films and series from the streaming service are rendered in optimal original quality.

### Equipment

The 164 cm TV has twin tuners for all types of reception. For example, it is possible to watch a program live while recording another channel via USB. With four HDMI inputs, three USB sockets, and others, many connection options are available. You can even stream content to other rooms via TV>IP.

Panasonic's My Home Screen version 5.0 is the operating system. This means that all modern applications beyond classic TV are available. Streaming services and media libraries can be accessed without using an external streaming device.

### Image and sound technology

Panasonic's most powerful image processor, HCX Pro Intelligent, controls the panel in the HZW1004. It optimally prepares the video signals for the master HDR OLED panel with 3,840 x 2,160 self-illuminating pixels.

Panasonic relies on its in-house Reference Surround Sound Plus system, including Dolby Atmos processing for the sound. Its sound quality and level reserves of 2 x 15 watts are very decent for a flat-screen TV but admittedly do not come close to an external sound system.

### Image quality

The TX-65HZW1004 has to prove itself in front of our incorruptible Konica Minolta CS2000 light sensor. Controlled by the Calman software, it mercilessly reveals even the smallest deviations from the ideal. But the Panasonic doesn't show any weakness. In Filmmaker mode, our test sample shows perfect values for color temperature, gamma progression, and color fidelity "out of the box," as one would otherwise only expect after a professional calibration. It goes without saying that the contrast range is beyond reproach for such a premium OLED. The subjective picture impression is correspondingly positive. Panasonic's TX-65HZW1004 offers stunning HDR quality – both in lit and completely dark rooms. The picture shows enormous depth and plasticity; you quickly feel like you are in the middle of the movie action and forget time and space. The colors are as gorgeous as they are natural, and movements are smooth and stutter-free.

### Conclusion

The Panasonic TX-65HZW1004 offers excellent picture quality second to none – a first-class reference TV that will thrill movie lovers.

*The OLED TV is mounted  
on a central stand and  
can be rotated*

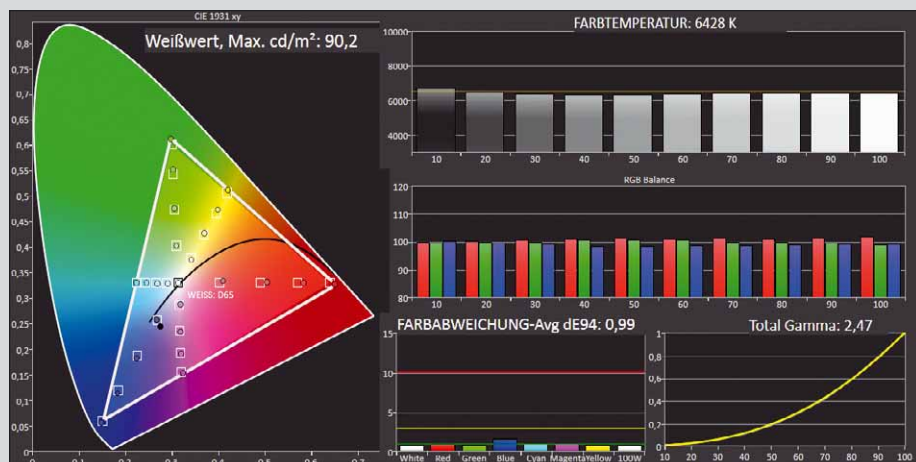




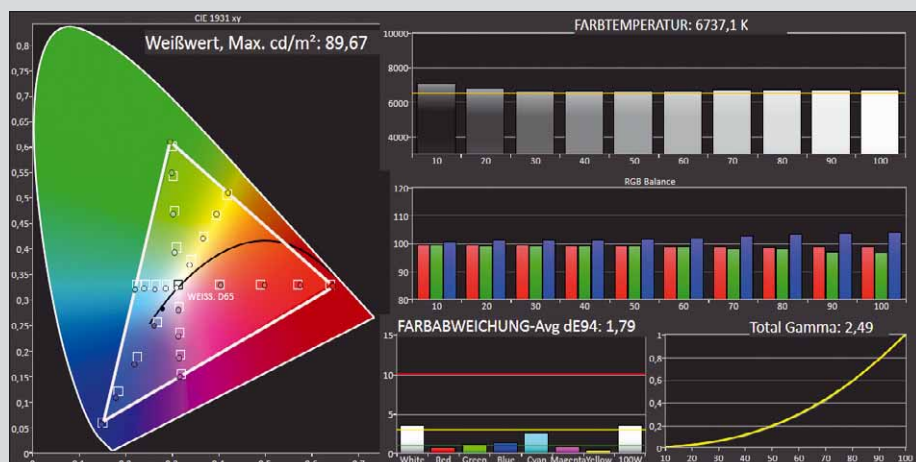


This TV set transforms your living room into home cinema

## HOME CINEMA WORLD Laboratory



Measurement with CalMAN software from Portrait Displays: The HZW1004 measurements are flawless in Film-maker Mode.



Measurement with CalMAN software from Portrait Displays: There is nothing to complain about in "True Cinema" mode. The marginally increased color temperature hardly plays a role in practice.

Laboratory measurements supported by Portrait Displays with CalMAN software from Spectral



<b>Price</b>	<b>2.000 Euro</b>
Distribution	Panasonic
Internet	www.panasonic.com

### Measured values

Dimensions with base (W x H x D, in mm)	1.449 x 896 x 350
Weight in kg	32
Black level (cd/m <sup>2</sup> )	0,0003
Contrast	> 500.000:1
Color temperature in Kelvin (movie mode)	6428
Power consumption operation/standby in W	160 / 0
EU-Energielabel	A

### Image

**40 %**

Picture illumination	4 %	★★★★★
Color fidelity (HDMI)	8 %	★★★★★
Contrast range (HDMI)	8 %	★★★★★
Moving picture (HDMI)	7 %	★★★★☆
Overall impression	8 %	★★★★★
Picture DVB tuner	5 %	★★★★☆

### Sound

**5 %**

★★★★☆

### Equipment

**30 %**

Hardware	15 %	★★★★★
Software	15 %	★★★★★

### Processing

**5 %**

★★★★☆

### Operation

**20 %**

Remote control	5 %	★★★★☆
Recording	5 %	★★★★★
Menu Smart TV	5 %	★★★★☆
Television menu	5 %	★★★★★

## Panasonic TX-65HZW1004\*

\*The model name, price (RRP), and equipment specifications for the device refer to the German market at testing. Prices and features may differ in the individual countries.

### Equipment

Screen diagonal in inch / cm / Resolution	65 / 164 / 3.840 x 2.160
Tuner / DVB-T2 / -C / -S/S2	2 / 2 / 2
CI+ interface	•
HDR: HDR10 / HDR10+ / HLG / Dolby	• / • / • / •
HDMI / Scart / Cinch-AV	4 / - / 1
HDMI: CEC / ARC	• / •
Audio-out: analog / opt. / coax / ARC	- / • / - / •
Headphone jack	•
Bluetooth	•
Cardreader / LAN / WLAN	- / • / •
USB / player / recorder	3 / • / •
Smart TV system	My Home Screen 5.0
White balance/color calibration	• / •
Room light sensor	•
Voice / motion control	• / -
Other	Filmmaker Mode

Reference class



Germany 1/21

Price/performance: very good

- + outstanding image quality
- + all popular HDR formats
- + Filmmaker Mode



BenQ X1300i – with gaming mode

# Playmaker: The BenQ X1300i reviewed

It's not new that movie enjoyment increases proportionally to the image size. Now gamers are also increasingly discovering the advantages of a large image; nowhere else can you get deeper into the action. BenQ has optimized a beamer with the X1300i so that a perfect gaming experience should be possible with it. We played a few rounds to find out more.



*The remote control is kept simple but is sufficient for the clear menu*

The most important feature of a display that is suitable for gaming is the short input lag. In gaming, input lag refers to the time delay that the signal experiences between the input and the display on the screen. Every millisecond counts here because the player has to react as quickly as possible to the actions displayed to him.

If it reacts only milliseconds too late because the image is only displayed with a slight delay, it may already have lost. For this reason, only a few projectors were suitable for gaming until now. BenQ has accelerated the image processing of the X1300i to get the signal to the screen as fast as possible.





All interfaces are on the back; the two screws on top hold the lid, under which also the dongle is located. The two built-in speakers also shimmer silvery through the grille



The control buttons and the zoom and focus dials are exceptionally located on the side of the camera

## The master of games

According to the manufacturer, the BenQ's input lag is 8.3 milliseconds and up to 16 milliseconds depending on the signal. To prove the projector's playability in the practical test, we were able to engage our gamer colleague and his PlayStation.

Playstation connected, gaming mode selected, and off you go. The BenQ offers the possibility to activate the so-called GamingMaestro by merely pressing a button. The corresponding button on the remote control does not have the symbol of a gaming controller for nothing. This opens the quick start menu with picture and sound settings optimized for different gaming genres. For example, presets for first-person shooters (FFP), role-playing games (RPG), and sports games (SPG) can be selected. Also, one can optimize the detail adjustment of the graphic display. Depending on where the current game's focus is, the graphics can either display or suppress the most delicate details. The display of much small information increases the image processing time, which affects the input lag. A quick mode can also

be activated with one click, in which case the display is not quite as detailed, but it gives the player valuable reaction time.

Our gamer was visibly pleased with the performance of the projector, but especially with the fine-tuning options. The gaming experience on the big screen is comparable to watching a blockbuster: You are literally in the middle of it instead of just being there. The excellent audio department positively contributes its part. The two built-in speakers are far more than a stopgap, especially since BenQ also allows for various sound settings.

## Fully networked

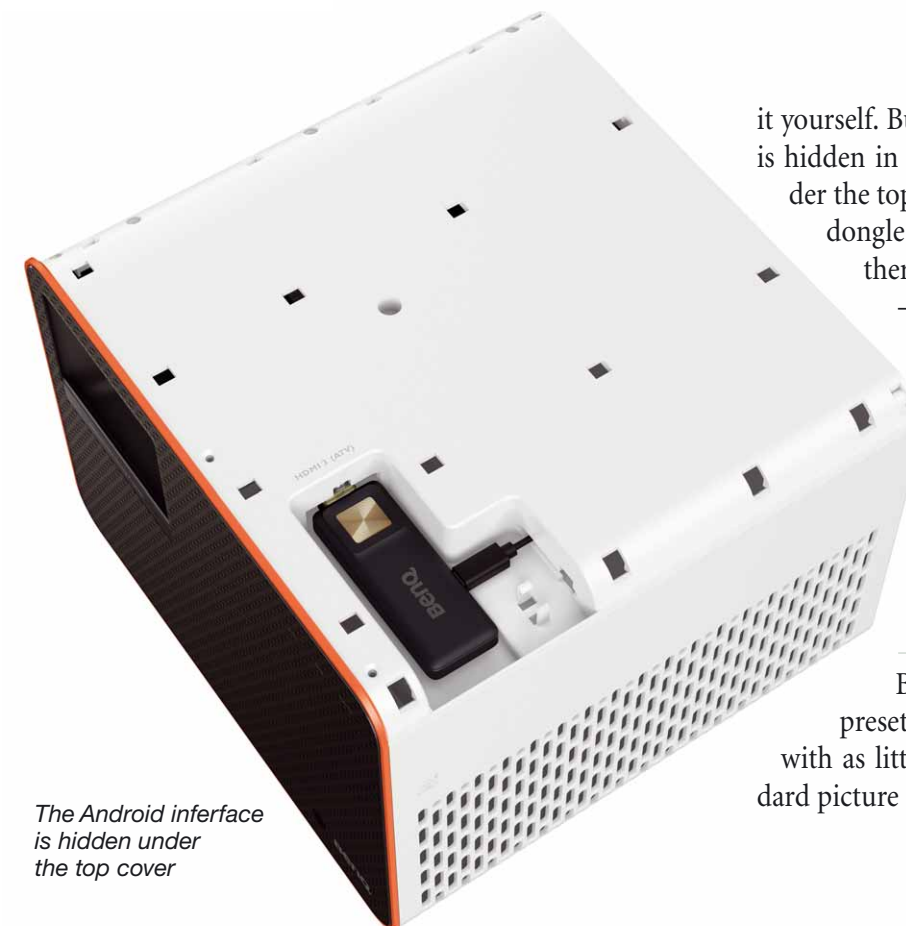
The X1300i also has other features that make it stand out even in competition with smart TVs. It comes with a dongle that provides the projector with a convenient Android interface in addition to the WiFi connection. The dongle was already installed in our test device. If you order the BenQ online, it might only be included, and you have to install

it yourself. But that is no witchcraft either; the connection is hidden in the form of an additional HDMI socket under the top cover, but you can easily remove it. Then the dongle is plugged into the HDMI socket accessible there and connected to the power supply via USB – cover closed and done.

In addition to the two HDMI inputs, another input named ATV appears in the input selection menu. Selecting this Android TV input provides the familiar Android interface and access to additional Play Store apps.

## Setup and image quality

BenQ once again relies on accurately preset presets to achieve an excellent picture performance with as little effort as possible. In addition to the standard picture modes, the X1300i has a gaming preset. If the



The Android interface is hidden under the top cover





The BenQ offers low input lag and dedicated game modes

console outputs an HDR signal, the color space and gamma values are adjusted accordingly. Furthermore, you can now adjust the picture and sound to the game genre with the GameMaestro mentioned above, whereby the speed of the signal processing can also be adjusted.

We sa already established that the X1300i is excellent for gaming. Furthermore, we measured that the BenQ can also adequately display 4K HDR movies. What is still missing is the performance of regular Full HD content. So, we quickly changed the signal generator accordingly, and after the visual inspection in "Cinema" mode, we used the measurement technology from Calman. The result is surprisingly good. After all, we get a perfect coverage of the HDTV standard color space BT.709 with hardly measurable deviations on the X1300i right away. Only the gamma curve has to be corrected a bit, but that can be done with a few clicks in the projector menu.

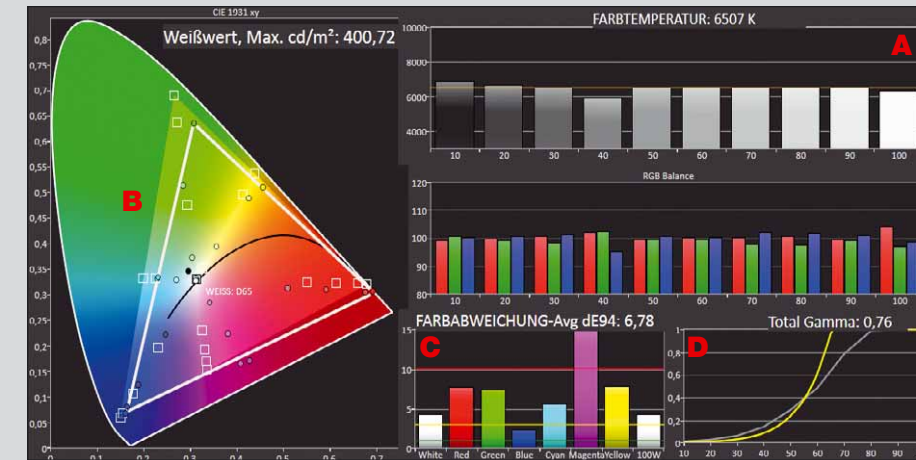
### Conclusion

BenQ got it right with the X1300i. Perfected for gaming, it has nevertheless inherited most of the virtues of its colleagues to cut a good figure in typical living room cinemas as well. Convenient streaming via Android TV is also available, and the settings for gaming can be adjusted at the touch of a button.

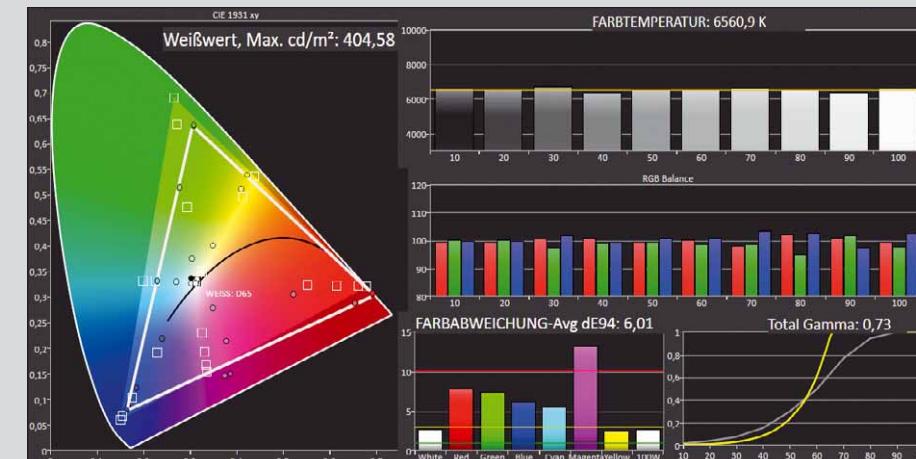
The stands are adjustable up to 0.79 inch



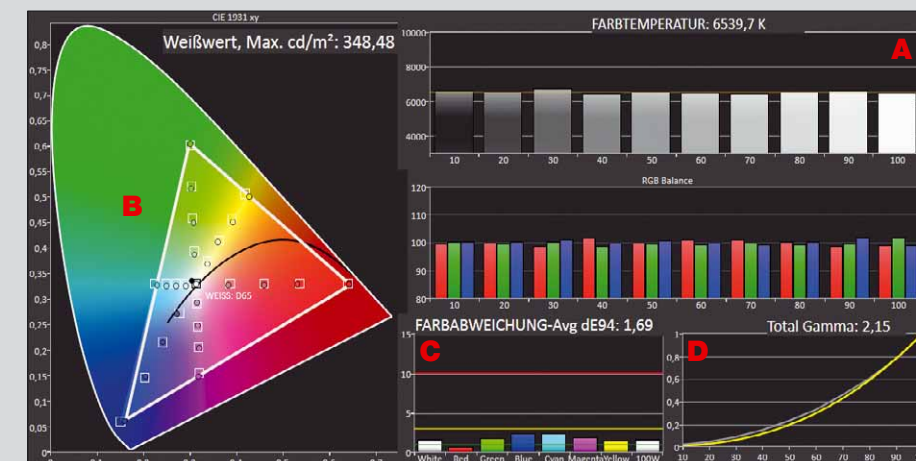
## HOME CINEMA WORLD Laboratory



We fed the X1300i directly with an HDR signal for the measurement, and it selects the corresponding picture mode automatically. The LED lights up in the bright standard mode. The picture already leaves an excellent impression on sight. The color temperature is at the desired 6500 Kelvin **A** in all brightness levels. The extended P3 standard color space is largely covered **B**. In terms of color deviations, only magenta is a bit out of line, with a tendency towards red at higher saturations **C**. The gamma curve is already close to the required PQ curve **D**.



In HDR gaming mode, the projector behaves similarly in terms of color fidelity and HDR reproduction. The extended D65P3 color space is almost completely covered, and the gamma values also provide sound reproduction in bright and dark parts of the picture.



Finally, we were curious to see how the BenQ would do in movie mode, so we fed it with HDTV signal and set the picture mode to "Cinema," color temperature and brightness to "Normal," gamma correction to 2.4 after some test runs. The color temperature is still at the desired 6500 Kelvin **A**. The BT.709 HDTV color space is correctly covered and nicely linear in all saturation levels **B**. The color deviations stay in the inconspicuous range **C** with a Delta E of well below 3.0. The gamma curve is still 2.2 with the specified setting and also has the required curve shape **D**.

Laboratory measurements supported by Portrait Displays with CalMAN software from Spectral





## BenQ X1300i

<b>Price</b>	<b>1.300 Euro</b>
Distribution	BenQ
Internet	www.benq.eu

### • Measured values

Lumen (according to manufacturer)	3000
Lumen (measured in Eco mode)	1040
Picture brightness (at 6500 Kelvin) ...black/white	1.16 / 1040
ANSI contrast	331:1
Full-on / Full-off contrast	897:1
Illumination (in %)	96
Operating noise (0.5 m/dB(A), in dB)	> 30
min. / max. distance (at 2 m image width, in m)	2,6 / 3,12
Projection ratio / zoom factor	1.3 - 1.56:1 / 1,2
Gamma (D65)	2,15
Dimensions W x H x D (in cm)	27,2 x 19,7 x 25,9
Weight (in kg)	6,4
Standby / operation (in watts)	- / 205 / 125 (Eco)
Lamp type / Lamp power (in watts)	LED
Price replacement lamp	-
Lamp life (in hrs) Standard / Eco	20.000 / 30.000
Cost per hr (in cents)	0

<b>• Image</b>	<b>60 %</b>	
Contrast	10 %	★★★★☆
Color reproduction	10 %	★★★★★
Sharpness	10 %	★★★★☆
Geometry	10 %	★★★★☆
Noise	10 %	★★★★★
Image smoothness	10 %	★★★★★
<b>• Practical</b>	<b>15 %</b>	
Zoom factor	5 %	★★★★☆
Fan noise	5 %	★★★★☆
Operating costs	5 %	★★★★★
<b>• Operation</b>	<b>15 %</b>	
Device	5 %	★★★★★
Remote control	5 %	★★★★★
Menus	5 %	★★★★★
<b>• Equipment</b>	<b>5 %</b>	★★★★☆
<b>• Processing</b>	<b>5 %</b>	★★★★★

### • Equipment

Projection principle	DLP 0.47"
Native resolution	1920 x 1080 (3840 x 2160 with XPR2 technology)
3D method	Frame-Packing (Full HD 3D), Top-and-Bottom Frame Sequential (3D Ready)
Connections:	
...video / s-video	- / -
...VGA / RGB / DVI / HDMI	- / - / - / •
...audio / 12 volt trigger / RS-232C	• / • / •
...Full HD	•
Motorized zoom / focus	- / -
Rear pro / Ceiling pro	• / •
Keystone compensation	Auto vertical & manual horizontal ± 30 degrees
Lens shift (manual/motorized)	- / -
Format switching	16:9 (6 selectable aspect ratios)
Remote control / illuminated	• / -
Signal compatibility	480i, 480p, 576i, 576p, 720p, 1080i, 1080p, 2160p
Special features	Gaming modes with low input lag, internal stereo speakers

## Top class

★★★★☆

# HOME CINEMA

WORLD

Germany 1/21

## Price/performance: very good

+ excellent picture quality
 + optimization for gaming

# The Equipment Classes

In HOME CINEMA WORLD, all products are classified into one of five performance classes:

- **Reference Class** – Uncompromising products with outstanding image and sound quality
- **Top Class** – Products for higher demands with excellent image, sound, and processing quality
- **Upper Class** – Products for quality-conscious connoisseurs who value good value for money
- **Middle Class** – Solid products that meet average requirements in all respects
- **Entry Level** – Qualitatively convincing products with an excellent price-performance ratio

## The Rating

Devices are tested and rated according to strict criteria and can reach up to five “stars”. Ratings are only comparable within a class and device type. To score four stars in the top class, the device must meet more demanding requirements than for a 4-star rating in the upper class. The model names, prices (RRP), and equipment specifications for the devices always refer to the German market at testing. For some devices, such as TVs, prices and features may differ in the individual countries.

The star rating provides comprehensive and concise orientation when searching for devices for your home theater. However, depending on your situation and application, the device with the best star rating is not automatically the best fit for you. For example, a projector may score very well overall but still produce quite a lot of fan noise. Depending on where the unit is placed, this either doesn't matter at all or can be seriously annoying in the worst case. Therefore, you should additionally consult the detailed information provided in the text of the test reports.

## The Test Equipment of the HOME CINEMA WORLD Editorial Team

For our tests, HOME CINEMA WORLD uses – among others – the following special measuring instruments and reference devices for the comparison of image and sound quality:

- Audio Precision
- Clio Win ATB
- Konica Minolta CS-2000
- Color analysis software CALMAN
- Kenwood CS-6030
- ELV EM800
- Load resistors Reohm 55/2000/4



Polk React: Soundbar with Alexa build-in

# ***Voice-controlled soundbar***

Soundbars are ideal when it comes to giving the TV sound a boost in a simple way. With a wireless subwoofer and radio speakers for the surround channels, Polk's React offers excellent sound and can even be operated via Alexa voice control.





“Alexa, increase the volume...” or “Alexa, switch to night Amode”... that’s how easy it is to control Polk’s new React soundbar. This is fun and works flawlessly because four microphones in the compact soundbar ensure problem-free recognition of all voice commands, even in noisy environments. Of course, the slim soundbar, which is about 86 centimeters wide, can reproduce movie sound and music because an array of two woofers and two tweeters ensures clean, balanced sound in the React Soundbar. Two passive diaphragms support the low-frequency range. But the real fun only comes with the React subwoofer that is part of our set. It works wirelessly and can deliver powerful, deep, and rich bass. The optionally available small SR2 active speakers, which are also controlled wirelessly and contribute the surround sound, provide real cinema sound. Thus, authentic 5.1 sound is possible with Polk’s handy components, and the React soundbar also understands movie sound formats like Dolby Digital and DTS.

### React Soundbar

The Polk React soundbar can be connected and set up in just a few steps. The matching Alexa smartphone app (available free of charge for Android and iOS) helps with the initial setup and even allows the Polk sound system to be paired with various Alexa-compatible products such as lighting control. Therefore, in addition to HiFi and home theater sound, the React sound system also offers the possibility to control some of the home technology via voice input. However, the Polk React’s primary task should be to provide maximum entertainment while listening to music and watching movies. And the relatively inexpensive sound system has that entirely under control.



The separately available React subwoofer can be connected wirelessly to the soundbar and delivers a vibrant, deep bass reproduction despite very compact dimensions



The Polk React soundbar can be operated via remote, buttons on the device, or very conveniently using Alexa voice control.



With dimensions of only 20 x 11 x 10 centimeters, the SR2 wireless rear speakers can be placed in virtually any listening room or mounted from the wall behind the listening position. Only a power connection for the two plug-in power supplies is required

Tonally, there are no significant blunders because the Polk React set consisting of a soundbar, subwoofer, and two SR2 surround speakers plays crystal clear and balanced on a remarkably high level. The compact subwoofer also impresses with its deep and precise reproduction of the lowest frequencies. However, if some movies’ dialog reproduction is not entirely convincing, the level of voices can be individually adjusted via “VoiceAdjust.” Several sound presets are available at the push of a button (or voice input) with Movie Mode, Music Mode, and Night Mode.

In practice, the Polk React system works smoothly and can be operated via remote control, buttons on the device, or conveniently via voice control. An HDMI input (with ARC) allows the connection to the TV, and an optical digital input is optionally available. Music playback from a smartphone is also no problem, thanks to the Bluetooth receiver.

### Conclusion

The package of React soundbar, React subwoofer, and SR2 surround speakers from Polk is compelling in terms of sound because the amazingly affordable set delivers rich, balanced, and room-filling sound, which inspires both music playback and movie sound. The almost wireless 5.1 set provides remarkable comfort through its voice control. Thanks to “Alexa built-in,” the Polk sound set can be operated by simple voice commands and even allows coupling to a multi-room system and the control of various home automation products. This makes consumer electronics fun, and in the case of the Polk React sound system, this fun doesn’t cost a fortune – a real price tip!





**Sound**  
5.1 sound system



Real 5.1 sound, including Dolby Digital and DTS, is possible with the compact set consisting of Polk React soundbar, subwoofer, and rear speakers. The inexpensive set is also decently manufactured and even looks really good thanks to the dark gray cloth.

## Polk React Soundbar / Subwoofer / SR2

<b>Price</b>	React soundbar around 300 Euro React subwoofer around 200 Euro Rear speaker SR2 around 180 Euro
Distribution	Sound United
Internet	www.polkaudio.com

**• Equipment**

Dimensions (W x H x D)	864 x 57 x 121 mm (Soundbar) 218 x 348 x 419 mm (Subwoofer) 199 x 114 x 103 mm (Rear)
Weight	2,9 kg (Soundbar) 7,5 kg (Subwoofer) 0,8 kg (Rear)
Colors	black
Operating principle	5.1
Sound programs	Movie, Music, Night, VoiceAdjust
Amplifier	–
Driver soundbar (nominal diameter)	2 x 96 x 69 Tiefmitteltöner 2 x 25-mm-Hochtöner 2 x 100-mm-Passivmembran
Driver subwoofer (nominal diameter)	1 x 180 mm
Connections	1 x HDMI (ARC), 1x optical digital, Bluetooth, WLAN
Special features	Alexa built-in, VoiceAdjust

<b>• Sound</b>	50 %	★★★★☆
<b>• Practice</b>	50 %	★★★★★

**Upper class**  
★★★★★

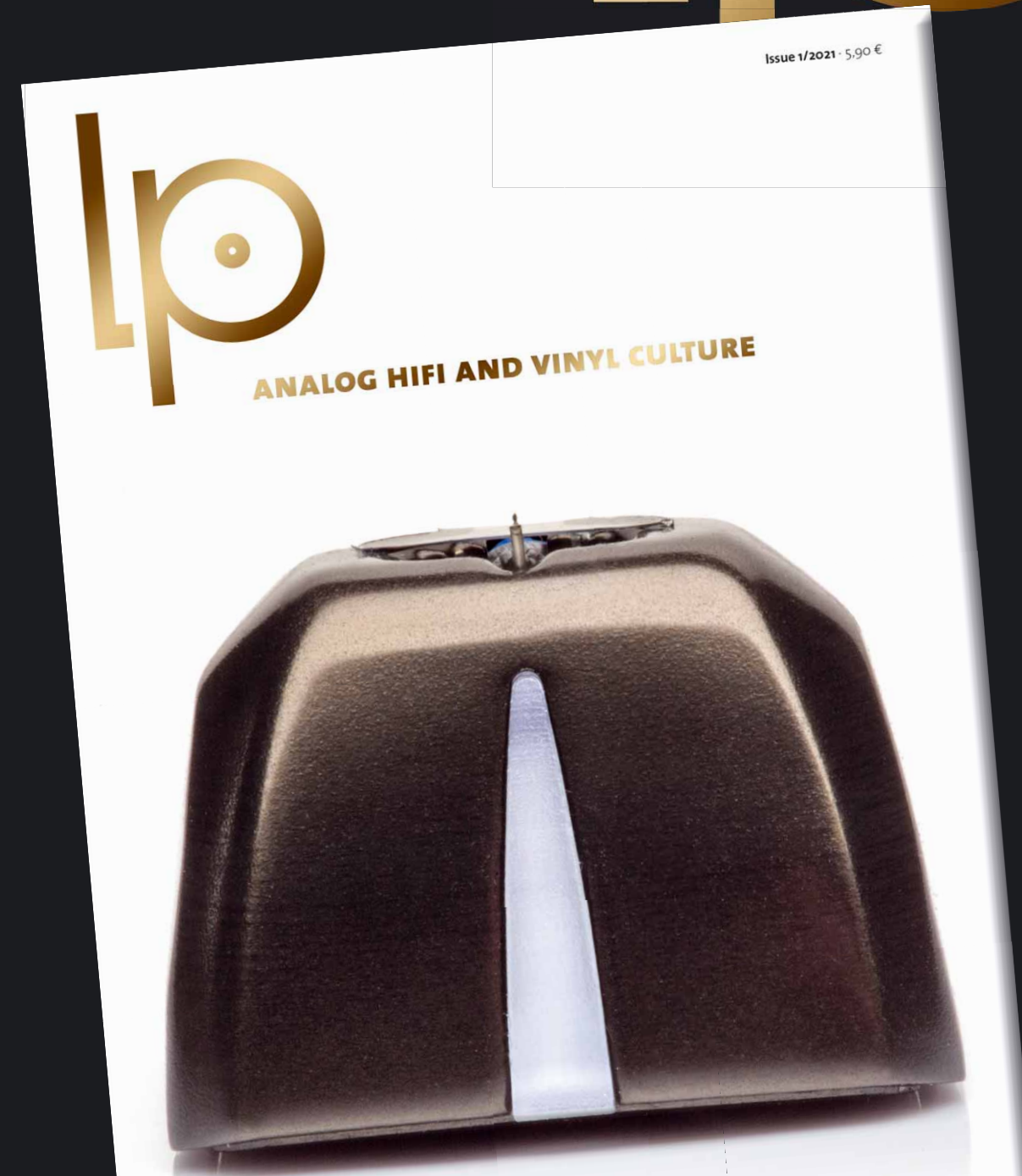
**HOME CINEMA**  
WORLD

Germany 1/21

**Price/performance: excellent**

- + Voice control via Alexa
- + Multiroom capable, wireless rear speaker
- + easy operation

**Coming soon**



Issue 1/2021 - 5,90 €



**ANALOG HIFI AND VINYL CULTURE**





Velodyne DB-10: World's first test of the new Deep Blue subwoofer series

# ***Precise low bass from a small cabinet***

With the Deep Blue series, Velodyne presents completely newly developed active subwoofers that are equally compact and powerful.

For over 40 years, the Velodyne brand has stood for low-frequency sound in perfection. Generations of hi-fi and home cinema enthusiasts appreciate the sonic qualities of Velodyne active subwoofers. They are inspired by the very own dynamics and deep bass precision of these bass specialists. Since the end of 2019, Velodyne has been a subsidiary of the Hamburg-based HiFi distributor Audio Reference – one of the most renowned partners in the industry for high-quality audio components. Audio Reference company boss Mansour Mamaghani is building on the first-





class reputation of the Velodyne brand and has expanded Velodyne's extensive product range: the first new product series under new management is the Deep Blue series, from which we have selected the DB-10, an enormously powerful yet compact subwoofer, for our test.

### Deep Blue DB-10

The perfect active subwoofer should be as deep as an ocean and powerful and punchy as a boxer. To meet this demand in the new Deep Blue series, the German-American Velodyne team has left nothing to chance and developed all



A double ferrite magnet in conjunction with the high-performance voice coil and extra-stable membrane provides the DB-10 driver with an enormously strong magnetic field. It ensures a clean, deep, and dynamic low-frequency reproduction.

components of the new series completely new. The linchpin of the DB-10 is an extremely powerful woofer with a reinforced 10-inch cone and a four-layer 52mm voice coil. Two massive superimposed ferrite magnets provide the appropriate drive. A 350-watt amp is responsible for this powerhouse's energy supply; if necessary, this module even provides up to 850 watts of short-term power. To convert this enormous power into undistorted, precise, and low-reaching sound, Velodyne has given the DB-10 an exceptionally robust, low-resonance housing. With a wall thickness of 25 millimeters and a twice as thick baffle, the closed cabinet of the DB-10 remains neutral in sound even at high volumes and guarantees precise low bass. Thanks to the closed design (and active equalization), the Velodyne delivers considerable, dust-dry deep bass, which one would hardly

expect from this relatively compact enclosure. Flow noise from a bass reflex port is non-existent, thanks to the closed cabinet of the DB-10.

### Laboratory and practice

With dimensions of around 29 x 31 x 35 centimeters, the very handy subwoofer cuts a first-class figure in the measurement lab and plays cleanly and precisely down to regions below 20 Hertz. Even at higher levels, the compact DB-10 doesn't "run out of breath" and delivers dynamic levels of up to around 105 dB if required. The connection of the DB-10 to a hi-fi or home theater system is quickly made via RCA jacks or high-level connectors if no sub-out is available on the hi-fi amplifier. Level, crossover frequency, and phase can be adjusted via a rotary control. Thanks



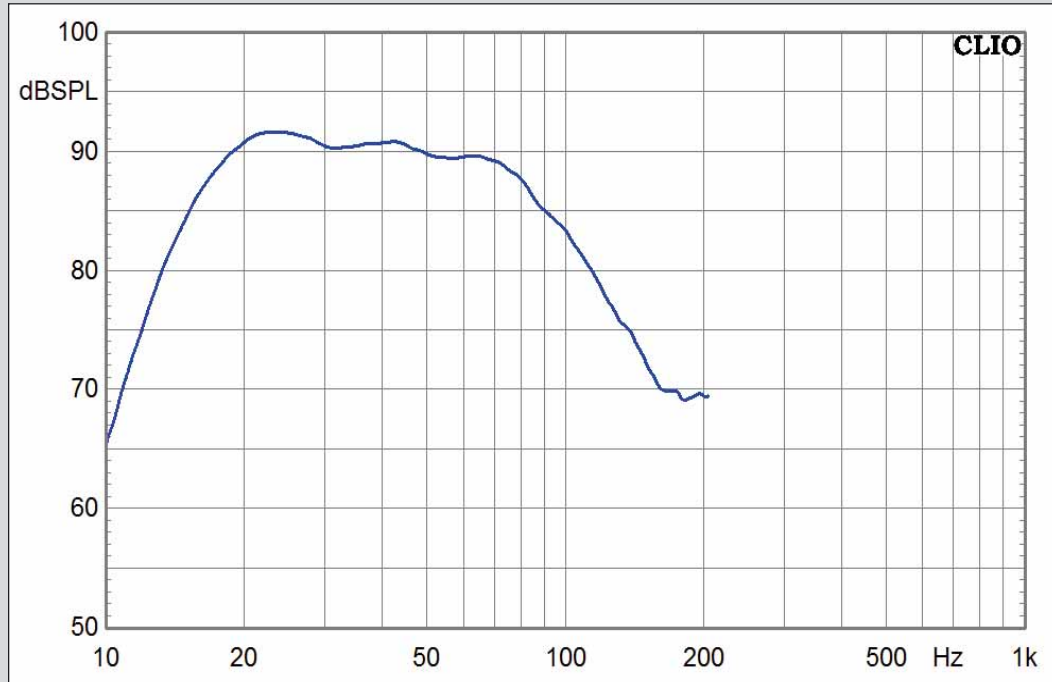
Thanks to its RCA connectors and high-level input, the Velodyne DB-10 can be easily connected to AV receivers and also hi-fi integrated amplifiers



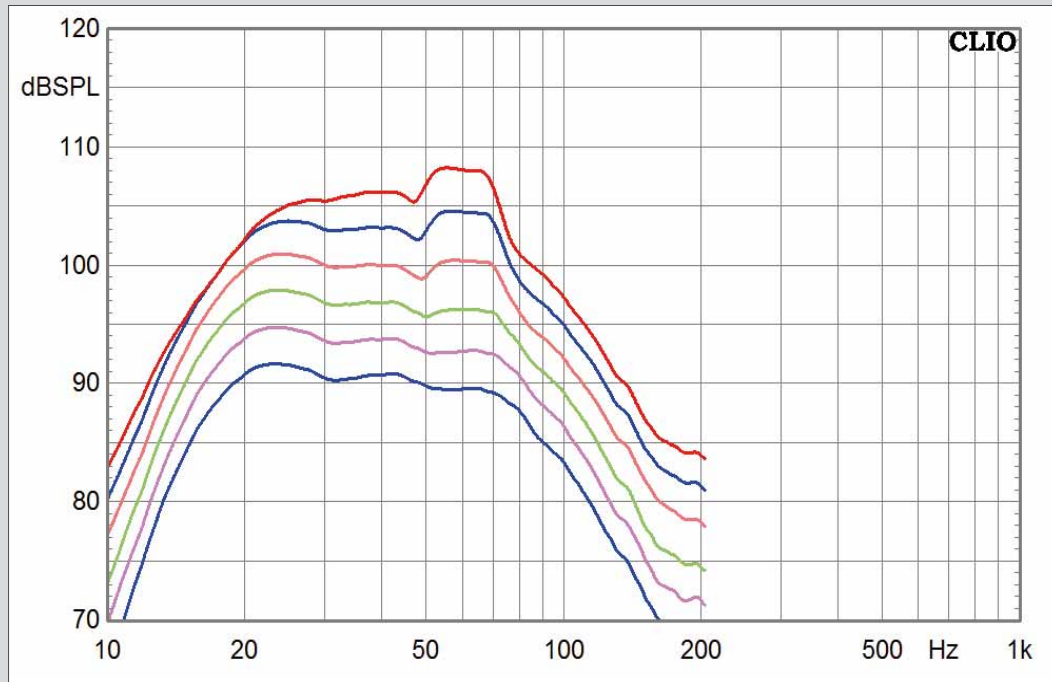
to absolutely neutral, balanced, and to the point low bass reproduction, the Velodyne DB-10 can be easily integrated into any listening room and adapted to existing speaker systems. Once listening tests have determined the level and crossover frequency, the DB-10 inspires with its physically

noticeable power in the lowest registers. Like a much larger subwoofer, the DB-10 moves vast amounts of air in the listening room and shakes crisp impulses easily from the sleeve - precise, balanced, and enormously playful, so home theater is really fun!

## HOME CINEMA WORLD Laboratory



With a lower cutoff frequency of around 18 Hertz, the compact DB-10 inspires a fantastic value even for much larger subwoofers.



The Velodyne DB-10 offers enormous dynamic reserves and delivers balanced, deep bass response even at levels approaching 105 dB.



### Conclusion

With the brand new Deep Blue series, Velodyne has landed a big hit under the new management of Audio Reference because the powerhouse DB-10 raises the bar for compact active subwoofers again significantly. Rich, precise, and dynamic low-frequency reproduction to below 20 Hertz from a practical housing - the Velodyne Deep Blue DB-10 is an absolute highlight and the ultimate buy recommendation for every home theater and music lover.

## Velodyne DB-10

<b>Price</b>	<b>around 990 Euro</b>
Distribution	Audio Reference
Internet	<a href="http://www.audio-reference.com">www.audio-reference.com</a>

<b>• Equipment</b>		
Versions	Anthracite, scratch-resistant vinyl surface	
Dimensions (W x H x D in cm)	296 x 316 x 348 mm	
Weight	11 kg	
Type	closed, front-fire	
Power	350 W (RMS)	
Membrane diameter	200 mm	
Volume / Separation Frq. / Phase	Controller	
Inputs	Cinch / high-level	
Remote control / App	- / -	

<b>• Sound</b>		
	<b>70 %</b>	
Precision	20 %	★★★★★
Level stability	20 %	★★★★☆
Dynamics	15 %	★★★★☆
Physical effect	15 %	★★★★★

<b>• Laboratory</b>		
	<b>10 %</b>	
Frequency response	5 %	★★★★★
Distortions	5 %	★★★★★

<b>• Practice</b>		
	<b>20 %</b>	
Processing	15 %	★★★★☆
Equipment	5 %	★★★★☆

Top class



Germany 1/21

Price/performance: excellent

- + extremely powerful
- + precise bass reproduction
- + compact dimensions



Magnat Omega CS 12: Premium active subwoofer for HiFi and home cinema

# *Living-room-suitable active subwoofer*

Even large floor-standing speakers benefit from interacting with a full-grown active subwoofer because the latter's large diaphragms and powerful output stages provide audible bass and precise bass pressure. Magnat's new Omega CS 12 subwoofer is excellent proof of this theory.





There's an old saying that membrane surface area can only be replaced by even more membrane surface area. This is true because to produce rich, deep, and precise low bass, the surface area, diaphragm stroke, and amplifier power cannot be big enough. Magnat's new Omega CS 12 active subwoofer takes exactly these points into account, and the developers have packed the concentrated technology of the CS 12 into a beautiful, high-quality cabinet.

### Omega CS 12

With its classy, black high-gloss finish, the Omega CS 12 looks dazzlingly good and is a real eye-catcher in any living space. The approximately 38 x 40 x 46-centimeter case even looks a bit more elegant thanks to its beveled corners. A 12-inch driver with an effective diaphragm diameter of around 260 millimeters, enough to set plenty of air in motion, works in the solid cabinet front of the CS 12. This full-blown woofer driver features a powerful drive magnet, a heavy-duty

voice coil with a diameter of 70 millimeters, and a sturdy diaphragm that has been both glued and double-stitched to the large surround. So this driver is a real "monster" for high, undistorted levels. This driver is driven by a Class-D power amplifier, which can provide a full 525 watts (RMS), with short impulses even up to 1100 watts peak power available. Thus equipped, the Omega CS 12 can guarantee a clean, precise, and enormously deep bass reproduction. The linear reproduction characteristics of the CS 12, which operates with a closed cabinet, are controlled by an integrated DSP, whereby the user can even individually regulate the low bass content by 30 Hertz with extra control. This is not quite as effective as an elaborate control via parametric equalizers, but it allows a problem-free, quick calibration without measuring equipment to your listening room and listening habits. For some ease of use, the CS 12 is supplied with a handset for the volume control, and a large display on the front panel shows the set value.



Specially developed "Extended Surface Damper" ensure effective decoupling of the subwoofer from the floor thanks to a large surface area and vibration-absorbing material



In addition to the usual adjustment options for level, phase, and crossover frequency, the active module of the Magnat Omega CS 12 offers the possibility to individually adjust the low-frequency content by 35 Hz using the "bass extension control."

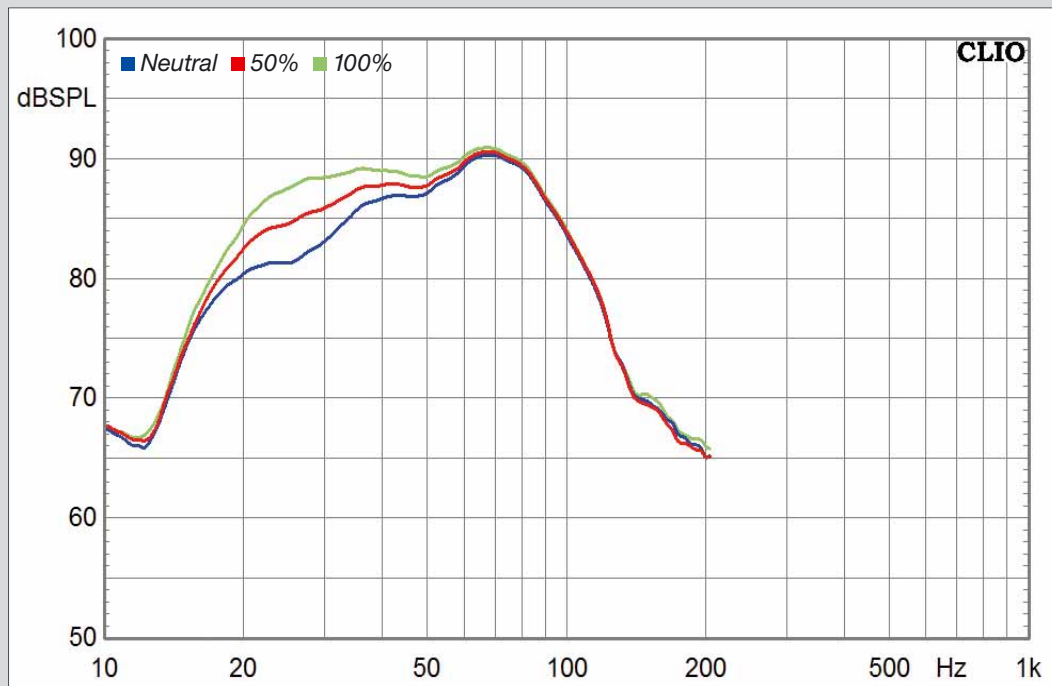
### Laboratory and practice

Even in "neutral," the Omega CS 12 delivers a rich level, which can be calibrated to maximum low reproduction up to about 25 Hertz thanks to the sensitively adjustable "low bass control." In the discipline of level stability, the Magnat subwoofer has its nose in front and can easily shake up to 110 dB of undistorted sound pressure from its sleeve when needed. The Omega CS 12 has four large damper feet made of absorbent material, which effectively decouple the sub-

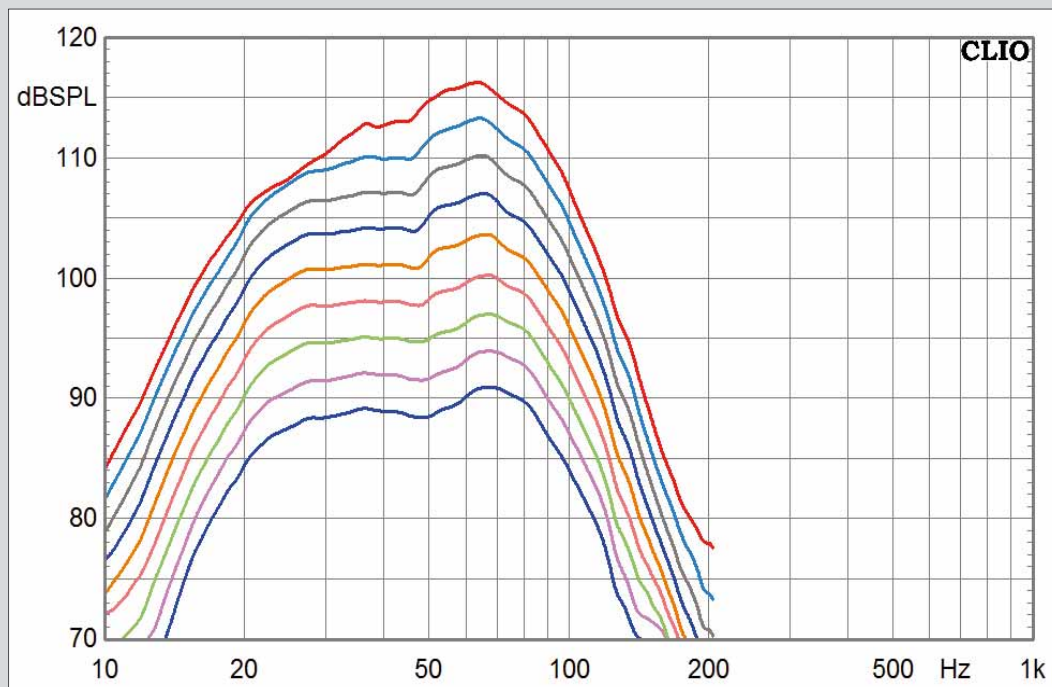
woofer from the floor. The Magnat can bring its performance to the listening room in the best possible way and gives the movie sound a particularly gripping dimension in the lowest registers. Even ultra-deep sound effects, such as in the opening sequence of "Edge of Tomorrow," are pushed into the listening room by the CS 12 with the highest precision and enormous emphasis. A slight overemphasis of the CS 12 by 65 hertz provides a physically perceptible feeling of pressure and adds some more fun.



## HOME CINEMA WORLD Laboratory



Depending on the listening room and personal taste, you can adjust the low bass amount around 35 Hz. The neutral position (blue) is suitable for placement close to the wall, while 100% "bass extension" allows for a linear reproduction up to 35 Hz. Allow 25 Hertz (Green).



Thanks to large 12-inch drivers and over 500 watts of amplification power, clean levels of up to 110 dB are no problem for the Omega CS 12, more than enough for incredibly dynamic home theater evenings.



### Conclusion

Low bass can be this beautiful: Magnat's new Omega CS 12 active subwoofer shines both in the listening test and with its elegant design and first-class build quality. Its enormously resilient 12-inch driver, combined with the potent power amplifier, ensures rich and precise low bass, which can be individually controlled. Ample level reserves and maximum sound fun are guaranteed.

## Magnat Omega CS 12

<b>Price</b>	around 1.000 Euro
Distribution	Magnat
Internet	<a href="http://www.magnat.de/en/">www.magnat.de/en/</a>

#### • Equipment

Versions	Piano finish, high gloss black
Dimensions (W x H x D in cm)	385 x 400 x 450 mm
Weight	24 kg
Type	closed, front-fire
Power	525 W (RMS)
Membrane diameter	260 mm
Volume / Separation Frq. / Phase	Controller
Inputs	Cinch
Remote control / App	• / -

#### • Sound

	<b>70 %</b>	
Precision	20 %	★★★★☆
Level stability	20 %	★★★★★
Dynamics	15 %	★★★★★
Physical effect	15 %	★★★★★

#### • Laboratory

	<b>10 %</b>	
Frequency response	5 %	★★★★☆
Distortions	5 %	★★★★★

#### • Practice

	<b>20 %</b>	
Processing	15 %	★★★★★
Equipment	5 %	★★★★☆

Top class



Germany 1/21

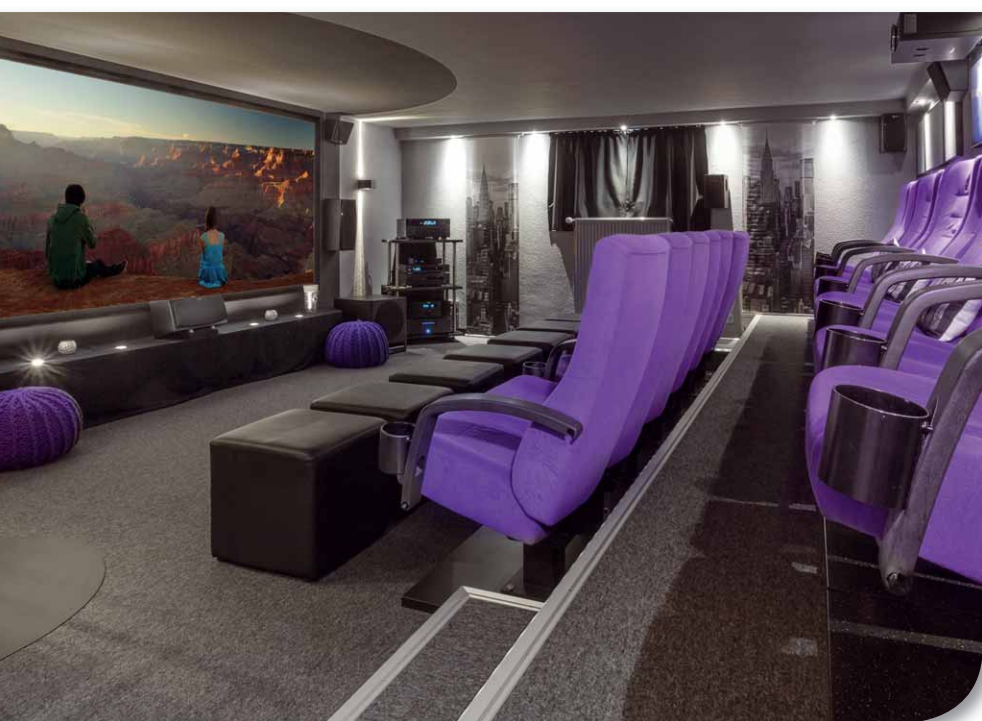
Price/performance: excellent

- + rich draught
- + adjustable low bass playback
- + premium quality



# Coming soon

Next issue September 1, 2021



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# Coming soon



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- Ground Zero • Hifonics • JVC
- Kenwood • Musway • MTX
- Sony • Zenec

### Best topics

- WIFI moniceiver
- 6.5" component speakers comparison
- Mercedes speakers
- 12 channel sound processor
- Easy install powered subwoofer and more