

HOME CINEMA WORLD



Now available

in ePaper Stores and
www.carhifi-international.com



Michael E. Brieden
Verlag GmbH
The Test-Specialists
Duisburg · Germany

CAR & HiFi

INTERNATIONAL

2/21 · 4,80 €

European Edition



Featured brands **Best topics**
• Premium camper naviceiver

www.carhifi-international.com

Movie Enjoyment

After a busy day, there is hardly anything more relaxing than sitting in front of the television or screen with family or friends in the evening and enjoying a good film together in a relaxed atmosphere.

Of course, a dedicated home cinema in its own room offers the greatest movie enjoyment. For example, our reader Gerald fulfilled an extraordinary dream with his Star Wars movie palace „Imperatorium“. And thanks to modern technology, movies can also be enjoyed in exquisite quality in the living room. The picture quality of today's televisions is enormous and there are also many solutions for the sound. And if a surround set with full-blown floor-standing loudspeakers is out of the question for furnishing reasons, then the manufacturers offer a variety of smart solutions from the soundbar to compact active or passive systems to in-wall installations. You don't have to do without immersive surround formats like Dolby Atmos.

Enjoy your home cinema!

Dipl.-Phys. Guido Randerath



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





06-13
Imperatorium
Black 6.2.4 Dolby Atmos cinema by Star Wars fan

06-13 **Imperatorium**
Black 6.2.4 Dolby Atmos cinema by Star Wars fan

14-20 **Award-Winning OLED TVs**
Two UHD TVs: Philips 55OLED806 +
Philips 65OLED936

22-26 **Metz Android TV**
Metz blue 55MUC8001Z tested

28-33 **Powerful Start**
Affordable and Powerful:
AV Receiver Denon AVR-X1700H

34-40 **Watch Bigger**
XGIMI AURA – LaserTV with Android UI



34-40
Watch Bigger
XGIMI AURA – LaserTV
with Android UI



14-20

Award-Winning OLED TVs

Two UHD TVs: Philips
55OLED806 + Philips
65OLED936

28-33

Powerful Start

Affordable and Powerful:
AV Receiver Denon
AVR-X1700H



22-26

**Metz Android TV Metz blue
55MUC8001Z tested**

All Tests

- 14 Philips 55OLED806**
- 14 Philips 65OLED936**
- 22 Metz blue 55MUC8001Z**
- 28 Denon AVR-X1700H**
- 34 XGimi Aura**

Categories

- 3 Editorial**
- 4-5 Content**
- 21 The Equipment Classes**
- 41 Coming soon**
- 41 Imprint**

Black 6.2.4 Dolby Atmos cinema by Star Wars fan

IMPERATORIUM

Home Cinema World reader and Star Wars fan Gerald is creating his personal movie theater, where not only picture and sound quality play a significant role, but also his passion for the Star Wars universe.





Equipment:

- » Size: 4.1 x 4.3 x 2.4 m
- » Projector: JVC DLA-X7900
- » Screen: 3.0 m in 21:9
- » Preamplifier: Yamaha CX A-5100
- » Power amplifier: Yamaha MX A-5000
- » Player: Panasonic DP-UB9004
- » Speakers: BM25 MK II, 4 x Canton Reference 9K, 4 x Canton In-ceiling 989
- » Subwoofer: 3 x JL Audio Fathom 110, 3 x XTZ 12.17
- » Other: Backes & Müller ICE 802 (DAC), MiniDSP 2x4HD, Niagara 1200 und HMS DCS (Strom)
- » Special: Bluesound Node 2i (Streamer), Butt kicker + Fisheramp

My journey takes me to Bamberg to visit our HOME CINEMA WORLD reader, Gerald. Arriving at my host's premises, I cannot even remotely guess what awaits me in the house's basement. As it is pleasantly warm today, my extremely good-humored host first leads me into the magnificent garden. There I enjoy the low sun, some peace, and the fantastic view of nature. While having a hot coffee, Gerald tells me how he came to have his movie theater: „I've always had a home theater. Even as a student, I had a TV with a VHS video recorder, amplifier and watched movies through the system.“ That was back in the 1980s. Gerald later took his stereo system with him to his current house. Over the years, the hobby has grown. I added newer and newer projectors, initially projecting onto the white wall. Later I added a dedicated screen.

„Ultimately, it was the room acoustics that made me decide to move the home theater to the basement.“ As a high-end stereo listener, Gerald had previously worked with absorbers in the living room to improve sound performance. Soon, Gerald and his wife didn't find that particularly homelike. He also missed image contrast, which the projectors could not fully display in the living room with white walls and a white ceiling. „That's when I sold everything and started from scratch,“ Gerald laughs and takes a sip of coffee.

Star Wars Reich

I descend into the cellar, well-fortified and with fresh air in my lungs. Here, my breath is taken away at first. I was expecting a few props, a few comics, maybe a figure or two - but not that: I'm standing in the middle of a vast room reminiscent of a fan store. All around me are replicas, fan articles,



The different film versions of the first trilogy by George Lucas are lined up as VHS in a display case.



In loving detail, this playset was created by Gerald. It shows the camp of the Ewoks on the planet Endor from „Return of the Jedi Knights.“



Impressive collection



C3PO, Han Solo, Obi-Wan Kenobi, a stormtrooper, Princess Leia, and Luke Skywalker are standing in front of R2D2 and Yoda.



Two huge front speakers provide a good sound. Gerald did without a center.

film boxes, and lovingly designed scene sets. Everything is neatly arranged in the room or displayed in glass cases. Collector's prices for individual original figures are in the four-digit range.



To prevent the glossy surface of the three subwoofer enclosures from interfering with the enjoyment of the picture, Gerald placed light-absorbing adamantium fabric over them.



The audio/video technology is located behind the seats. Here, too, figures from the Star Wars world serve as decoration.



Some originally packaged merchandise products from „The Empire Strikes Back“ are hardly affordable today.



Simple solution: Two screens in front of the screen effectively prevent stray light from falling on the ceiling.

„All this used to be my photo studio,“ Gerald explains. With a makeup table and dressing room. Now it's home to countless fan items that make every nerd's heart beat faster. „Where the movie theater is now, they took pictures,“ my host continues. I look at the small action figures, detailed spaceships, and playsets.

„Star Wars was the beginning of the world for me...as a kid,“ Gerald recalls, laughing heartily. „I was always into science fiction. Perry Rhodan and Space Patrol Orion.“

We come to a door modeled after Han Solo's Millennium Falcon. At first, I assume that this is the entrance to the cinema. But far from it. Behind it, we go directly into a second room that was not there before the renovation. Here stands a life-size Darth Vader as a guard. Moreover, the extensive film collection of the master of the house is housed. Another door leads directly into the home theater, which is a good 17 square meters.

Imperatorium

The name of the cinema is „Imperatorium.“ It is a reference to the empire from the Star Wars movies. Gerald describes himself as self-taught. He developed concrete plans for constructing the all-black room, for some of which he enlisted professional help. In particular, installing the projector in the back wall presented a significant construction challenge, which a contractor solved for him. „It was costly,“ Gerald says. It's a load-bearing wall, and steel beams had to be inserted into it to maintain load-bearing capacity. The projector fits precisely in the recess and can dissipate the warm air to the front. „This way, the distance of the projector is now large enough for it to illuminate the screen fully.“

The result is impressive. The entire cinema is consistently trimmed for high-contrast projection and high-end sound reproduction. A three-meter screen in Cinemascope format is used at the front, which is not sound-permeable. Around it, everything is covered with black adamantium fabric to absorb stray light as best as possible. A multi-bass array provides good low bass. Three JL Audio Fathom 110s are placed in front, and three XTZ 12.17 subwoofers are placed at the back of the room.

„For room acoustics, bass chunks are distributed throughout the hall.“ These measure 60 x 60 centimeters each and are additionally covered by Gerald. „These components come from studio technology,“ my host explains. In addition to the chunks, other edge absorbers and diffusers are



The recess for the JVC DLA-X7900 was created extremely elaborately so that it can be inserted directly into the supporting rear panel.

Interview: Gerald

Many choose Auro 3D; you have a Dolby Atmos setup. Why?

I want to hear a movie as it is mixed and not with any upmixers. With Auro 3D, too much goes to the ceiling, and I find it unnatural. Dolby Atmos and DTS:X fit better because most current films have this format.

Why do you not have a center?

I use the cinema alone 95% of the time and sit in the reference seat. I find the sound much more homogeneous without a center. Everything comes out exactly where it should be. Even on the side seats, the voice reproduction works very well.

The screen is not sound-permeable. What is the reason?

I can't imagine hanging a screen in front of a 20,000 EUR speaker. Not because I can no longer see the speakers, but because of the sound. For me, too much fine resolution is lost, especially in the stereo range.

What are your ten favorite movies on Blu-ray?

Star Wars: Episode 1 – 9
These films must be mentioned in the same breath. They gave my cinema the name „Imperatorium“ - that speaks for itself.

• Braveheart

Passion and devotion with a deadly outcome.

• Once upon a Time in the West

For me, this is the Western par excellence, accompanied by outstanding music.

The Fly

A fascinating story, brilliantly realized and acted.

• Gladiator

A modern Quo Vadis and Ben Hur, pure emotion, epic, dramatic, captivating, rousing - nothing more is possible.

• Pink Floyd – The Wall

An incredible work of art - the visualization of one of the best albums of all time.

• Avatar

A film like a fairy tale, grandiose.

• Lord of the Rings Trilogy

I devoured the three green books in the green cardboard slipcase as a child, read them over and over again, and then waited 25 years for a film adaptation. The opening sequence still gives me goosebumps even though I've seen it umpteen times.

• Greatest Showman

Heartbreakingly beautiful.

• MAD Max Fury Road

Just freaky. A film that you either love or hate.



placed specifically in the home theater. Preamplifier, player, and power amplifiers are easily accessible behind comfortable leather seats.

Stereo and Dolby Atmos

Two fully active Backes and Müller 25 MK2 are used as stereo speakers, placed next to the Cinemascope screen. „I decided on these because they are real high-end speakers,“ Gerald explains, eyes shining. „I think they're perfect for stereo. On the other hand, they're also great for cinema sound because they really can do SPL.“

Integrated 1,500-watt power amplifiers drive the front speakers. Gerald did without a classic center speaker (see interview). Four Canton In-ceiling 989s act as top speakers for Dolby Atmos



Three comfortable leather chairs are turned towards the screen so that an excellent view of the screen is maintained even from the side seats.



The acoustic ceiling is suspended by around 30 centimeters. Six diffusers are placed on it to provide more „room height“ above the seats.

and are embedded in the acoustic ceiling. At first glance, they are not visible. Four Canton Reference 9K supply the rear area, acting as side fills and rear surrounds. The entire system was calibrated by a company based in Nuremberg.

Leather armchair with butt kicker

The leather chairs have a reclining function. I immediately take a seat in it and lean back. Immediately, the backrest gives way a bit and folds back. I'm reclining and can look at the screen quite comfortably. „What I find ingenious about

the seats is that they are curved,“ Gerald explains to me. „They're centered on the middle of the picture.“ Underneath are so-called butt kickers. These additionally excite the structure-borne sound by causing the seats to vibrate slightly. This is not done randomly but in line with the sound. In this way, the bass is amplified and physically felt.

Camera on!

I sit back and relax while Gerald turns down the lights and starts his demonstration with stereo music. Immediately, a great stage builds up between the actively driven front speakers. The staging thrills me. Singers are precisely centered, while drums are audibly placed behind them. The fine resolution of the Backes pleases as they peel out even the quietest content in a clearly audible manner. I can immediately understand Gerald's enthusiasm for high-end stereo. Drums are reproduced authentically. Snare and bass drum bang properly. I enjoy the mixture of loudness and precision. It's not the speaker that limits the SPL but rather my ear.

After a short break, we're back at it again. This time, challenging movie fare is on the agenda: „Mad Max: Fury Road.“ Here, the equipment can truly shine. The voices at the beginning in Max's head move through the whole room. The transition from the front speakers to the side and rear surround speakers is seamless; everything sounds like it was cast from the same mold. However, the voices not only tra-



Next to three movie posters of the first Star Wars films is the entrance to the second room. The recessed lamps thus also appear in the episodes.



In the second room, there is a life-size figure of Darth Vader. In addition, numerous movie figures in different sizes are also placed here.

vel around me on the lower level but can also be heard above me. The top speakers, embedded in the acoustic ceiling, blend excellently into the sound. Tonal breaks are not present. When the pursuers race into the picture behind their vehicles, the butt-kickers under the seats make themselves felt. I'm literally shaken to the core. This is spectacular. Almost too much of a good thing. But it is enormous fun. The bass is contoured and extremely powerful. The multi-bass array with six subwoofers provides additional pressure and even kicks on the chest. Voices come precisely from the center of the screen, although no center is installed. Therefore, I sit down one seat to the right, and the voice moves with me. So, it goes back to the reference position. It's impressive how precisely the front stage buildup succeeds with two front speakers. All sound events in the room are precisely located in the sweet spot. Great.

Finally, the JVC DLA-X7900 projects „Star Wars: The Force Awakens.“ In the beginning, the seventh part of the saga already impresses with a rich black. There is no stray light at all on the black ceiling. The shutters in front of the screen do an excellent job. During the flight with the Millennium Falcon, I feel like I'm in the middle of the spaceship. Almost

like a co-pilot, I lean into the turns as it goes at breakneck speed through the crashed star destroyer. Behind me, I hear the fire of the pursuers. The bass shaker conveys laser cannon impacts convincingly with short, crisp punches in the seat. Impressive! Unfortunately, every home cinema day comes to an end. A glance at the clock tells me that it's time to leave. Gerald says, „Brotzeit.“

Back on the terrace, I start the interview. Gerald's wife has already dished up local goodies, accompanied by cold drinks and fresh bread. In this way, a fabulous day comes to an end, which will remain in my memory for a long time.

Conclusion

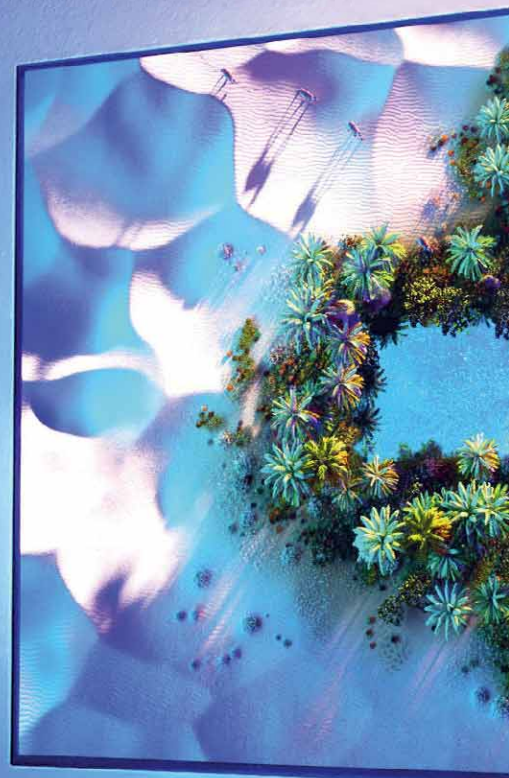
With the „IMPERATORIUM,“ Gerald has created an excellent fan cinema that delights with superb picture and sound quality as well as comfortable seats. Two anterooms with countless Star Wars replicas, playsets, and merchandise highlights invite you to linger for hours because there is always something new to discover. What a great cinema!

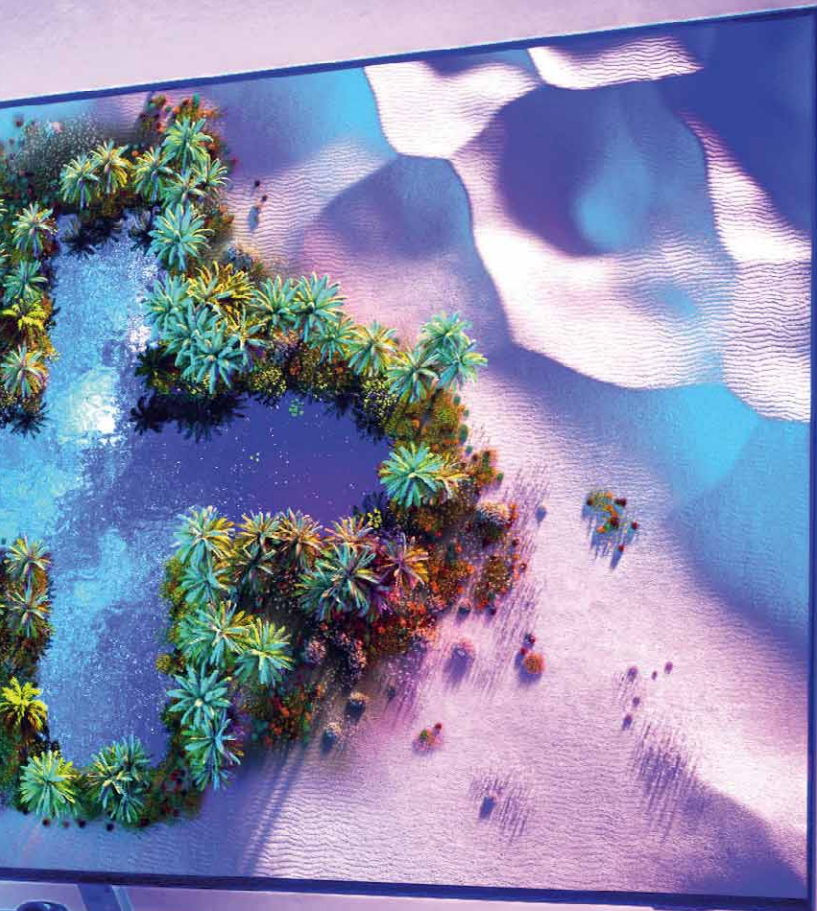
Text and photos: Michael B.Rehders

Two UHD TVs: Philips 55OLED806 + Philips 65OLED936

Award-Winning OLED TVs

Philips was successful with two TVs at the renowned EISA Awards this year. What characterizes the award winners 55OLED806 and 65OLED936, and what distinguishes them?





Reference

**HOME
CINEMA**
WORLD

Germany 1/22

Best Product

**HOME
CINEMA**
WORLD

Germany 1/22



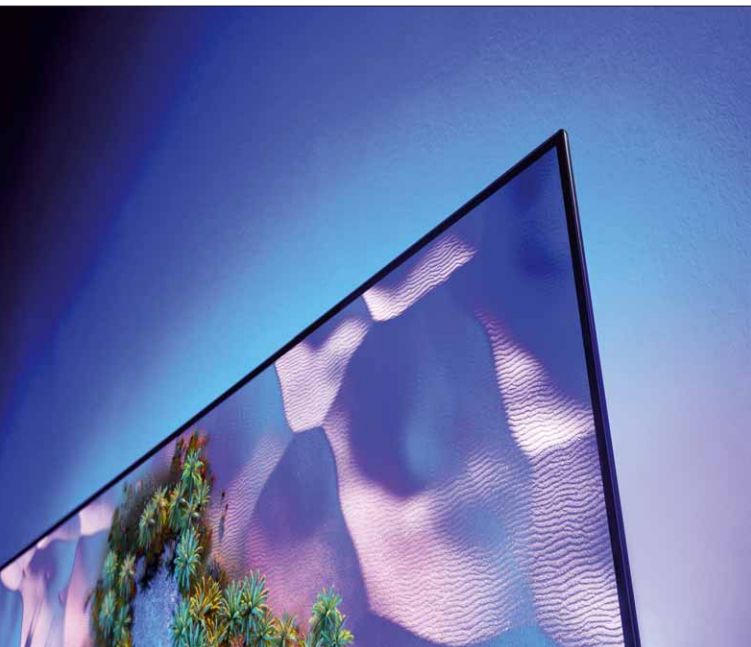
*Direct access
to the most
important
streaming
platforms*

The Expert Imaging and Sound Association EISA, of which HiFi Test is the exclusive German member for the Home Theater/Video product segment, selects the best products every summer. In 2021, Philips was successful in the „Best Buy OLED TV“ category with the 55OLED806 and the „Best Home Theatre TV“ category with the 65OLED936. „Best Buy“ does not mean the TV you get for the lowest price, but the product that offers the best at a reasonable price. Because the 806 has a lot to offer.

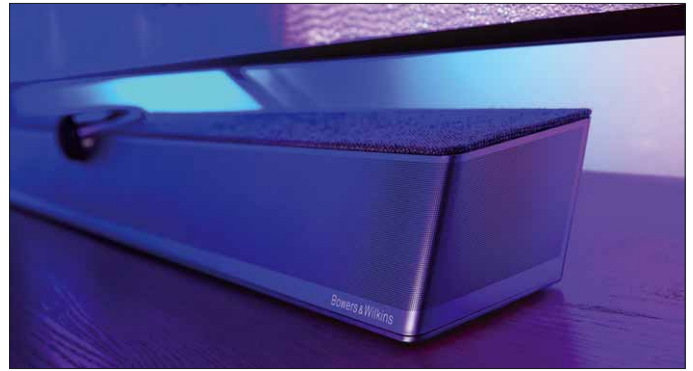
55OLED806

The current 800 series from Philips is available in sizes from 48 to 77 inches. The heart of the OLED TVs is the P5 engine with AI, now in the 5th generation. A new addition is the sixth mode, „movie detection.“ The OLED TV recognizes when a feature film is being watched and automatically switches to Cinema or Filmmaker mode when set accordingly to provide the most authentic cinema experience possible. This works reliably both when streaming and watching Blu-ray.

In addition, the 806 has a light sensor to optimally adjust the contrast and brightness settings to the respective room light. Like its predecessor, the TV supports all standard HDR formats with HLG, Dolby Vision, HDR 10, and HDR 10+. HDR 10+ Adaptive has now been added, which combines the metadata of HDR 10+ with the information of the ambient light sensor to adapt the picture to the respective lighting conditions scene by scene.



Best picture quality right into the corner



High-quality materials and best build quality in every detail

Anti-Burn-In

A new addition to the 800 series is the 2021 Philips Anti-Burn-In technology. The AI detects static content such as channel logos and reduces the luminosity in the affected picture area to prevent burn-in. This does not affect playback in the other picture zones.

The OLED806 uses the latest Android 10 operating system, which means that all smart TV functions from streaming to voice control are available. For classic TV reception, it has dual tuners for cable, satellite, and antenna. Four HDMI and three USB ports ensure good connectivity. Four-sided Ambilight provides the right lighting atmosphere if desired.

Sound

The 55OLED806 has a 2.1 sound system with 50 watts of power. A triple-ring driver on the back of the device takes care of the low-frequency range. Passive radiators support it. The Philips sound system can be adjusted to the room and listening position via the microphone in the remote control. Various sound modes, such as dialog, music, movie, or night mode, are available. A new addition is Mimi. With this technology, sound reproduction can be adjusted to the personal hearing ability via the app, and speech intelligibility can be increased. This is a great feature, especially for people with impaired hearing.

Gaming

Philips has also thought about gamers. The 806's HDMI 2.1 capabilities include e-ARC, VRR for 4K from 40 Hz to 120 Hz with high bandwidth of 48 Gbps (4:4:4, 12-bit), FreeSync Premium Pro, and Auto Game mode. The „Auto Low Latency“ mode, which was already used in the 2020 models, is also part of the performance package.

65OLED936

The 936 is the latest evolutionary stage of Philips' OLED+ range. Of course, the top model can do everything the OLED806 can. And it offers even more. It uses the latest high-performance OLED panel with a new emitter layer and a micro-lens array for greater peak brightness. It also has a dual-core processor.

The new 5th generation P5 Intelligent Dual Picture Engine is the only one to offer AI Smart Bit Enhancement 2.0 and AI Machine Learning Sharpness. Instead of a single sharpness adjustment for the entire image, AI Machine Learning Sharpness enables local, individual sharpness adjustments for multiple, different image areas. AI Smart Bit Enhancement 2.0 solves the problem of detail loss when removing banding artifacts from poor source material. Thanks to the added processing power of the AI processor, the system can boost 8-bit video to near-14-bit quality in areas where banding occurs, resulting in smoother transitions without loss of detail in other areas of the image.

Philips also works with the sound specialists from Bowers & Wilkins for the latest OLED+ generation. The soundbar that comes with the TV has been further optimized. Improvements include higher-quality crossovers, new housings for all three tweeters, a 100 mm x 60 mm cone with a stiffer profile, and a more powerful magnet for the dedicated bass driver. In addition, there are new voice coils for the four mid-range drivers and new cones for the slightly modified Atmos Elevation units.

Picture and sound quality

The OLED806 already offers superb image quality in Filmmaker mode. Colors, sharpness, movements, details, and contrast are already excellent ex-works. Added to that is the decent sound reproduction. In combination, the picture and sound qualities of the 55OLED806 convey an authentic



The OLED936 is also a gem on the wall

and thrilling movie experience. It's easy to get completely immersed in the action and forget everything else. And even though you can't accuse the 806 of any faults, the 65OLED936 does everything a bit better. You can ask yourself how this performance can be improved even more.

Conclusion

Philips 55OLED806 and 65OLED936 are outstanding TVs that rightly bear their awards. They set standards in their classes, and the OLED936 is undoubtedly one of the best TVs around.

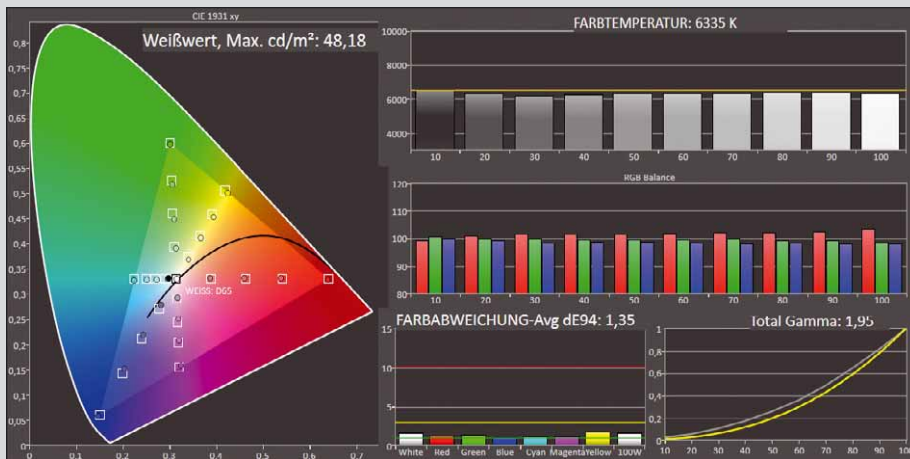
Dipl.-Phys. Guido Randerath



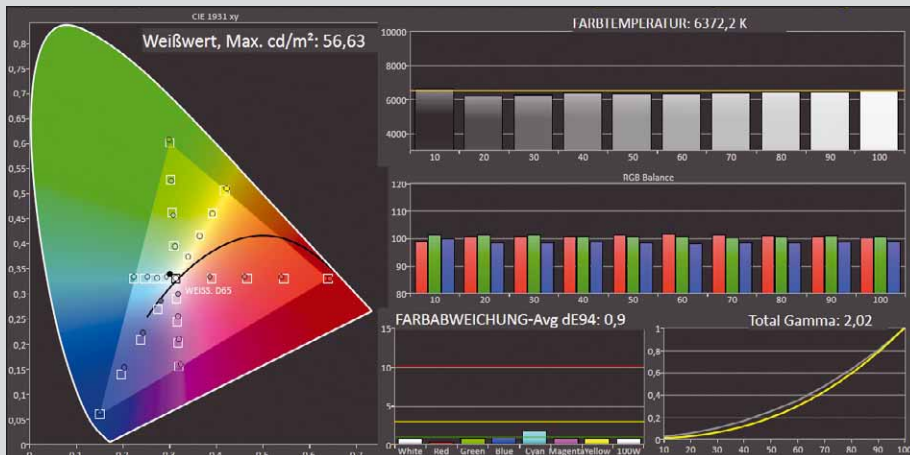
Philips famous Ambilight



HOME CINEMA WORLD Laboratory



The 55OLED806 already offers almost perfect measurement values in Filmmaker mode ex-works. The color fidelity is exemplary without any recalibration. The noble 65OLED936 shows even lower color deviations with its new panel. A Delta E of 0.9 can hardly be beaten.



Laboratory measurements supported by Portrait Displays with CalMAN software



The feet of the 806 can be mounted with the silver or black side facing forward

Price	1.800 Euro
Distribution	TP Vision, Hamburg
Phone	0180 5010469
Internet	www.philips.de

• **Measured values**

Dimensions with foot (W x H x D in mm)	1.228 x 719 x 280
Weight in kg	19,4
Black level (cd/m ²)	< 0,0001
Contrast	> 500.000:1
Color temperature in Kelvin (Movie mode)	6335
Power consumption Operation / Standby in W	90 / 0
EU energy label	G

• 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 %	★★★★☆
• Features	30 %	★★★★★
Hardware	15 %	★★★★★
Software	15 %	★★★★★
• Build quality	5 %	★★★★★
• Operation	20 %	★★★★☆
Remote control	5 %	★★★★☆
Recording	5 %	★★★★☆
Menu Smart TV	5 %	★★★★☆
Television menu	5 %	★★★★★

Philips 550LED806

• **Features**

Screen diagonal in inch / cm / resolution	55 / 139 / 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 / - / -
HDMI: CEC / ARC	• / •
Audio out: analog / opt. / coax / ARC	- / • / - / •
Headphone jack	•
Bluetooth	•
Card reader / LAN / WLAN	- / • / •
USB / Player / Recorder	3 / • / •
Smart TV system	Android-TV
White balance / color calibration	• / •
Room light sensor	•
Voice / motion control	• / -
Other	Ambilight

Top Class 1.0



**HOME
CINEMA**

WORLD

Germany 1/22

Price/performance: Outstanding

- + Image quality**
- + HDMI 2.1**
- + Ambilight**



B & W soundbar with the characteristic tweeter

Price	3.900 Euro
Distribution	TP Vision, Hamburg
Phone	0180 5010469
Internet	www.philips.de

• **Measured values**

Dimensions with foot (W x H x D in mm)	1.449 x 931 x 264
Weight in kg	31,6
Black level (cd/m²)	< 0,00001
Contrast	> 500.000:1
Color temperature in Kelvin (Movie mode)	6372
Power consumption Operation / Standby in W	130 / 0
EU energy label	G

• 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 %	★★★★★
• Features	30 %	★★★★★
Hardware	15 %	★★★★★
Software	15 %	★★★★★
• Build quality	5 %	★★★★☆
• Operation	20 %	★★★★☆
Remote control	5 %	★★★★☆
Recording	5 %	★★★★☆
Menu Smart TV	5 %	★★★★☆
Television menu	5 %	★★★★★

Philips 65OLED936

• **Features**

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 / - / -
HDMI: CEC / ARC	• / •
Audio out: analog / opt. / coax / ARC	- / • / - / •
Headphone jack	•
Bluetooth	•
Card reader / LAN / WLAN	- / • / •
USB / Player / Recorder	3 / • / •
Smart TV system	Android
White balance / color calibration	• / •
Room light sensor	•
Voice / motion control	• / -
Other	Ambilight

Reference Class 1.0



Germany 1/22

Price/performance: Very good

- + Image quality
- + Sound quality
- + Ambilight

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

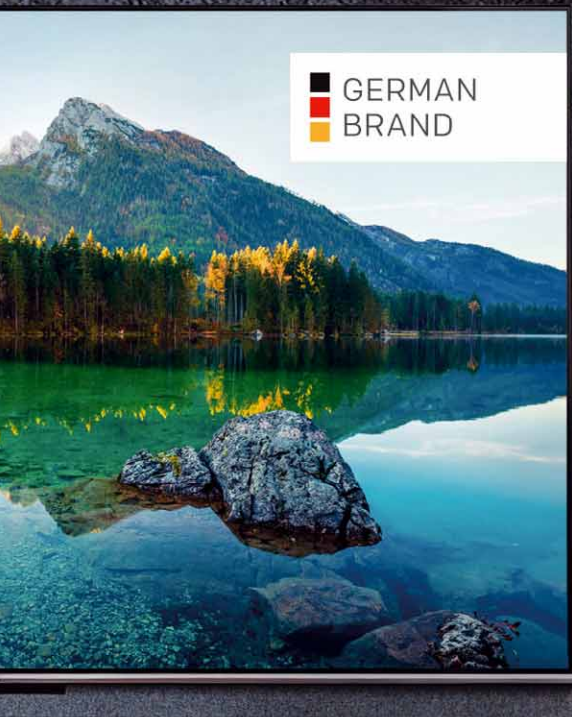
Image
UHD TV (LED)

Metz blue 55MUC8001Z tested

Metz Android TV

The German TV manufacturer Metz has recently added Metz blue to its range, a comparatively inexpensive TV line that offers the best streaming options with Android TV.





GERMAN
BRAND



Metz televisions have long stood for the best quality „Made in Germany.“ In addition to the excellent image quality, the devices are known for their superb TV reception with dual tuners and good recording capabilities directly to the internal hard drive. Such quality and features come at a price, of course, and so Metz TVs in the classic lines are often a bit more expensive than those of the Asian competition. Under the Metz blue banner, the Zirndorf-based company is now launching lower-priced devices that are somewhat slimmed down in terms of features and do without a double tuner and hard drive. Instead, they rely on Android for the smart TV system and thus open the door to the streaming world.

Direct LED

For the display of the 55MUC8001Z, Metz relies on a 50/60 hertz LCD panel with Direct LED backlighting. The LEDs are distributed over the entire surface behind the LCD layer,

enabling a uniform illumination and high peak brightness. The 139-cm TV supports the most popular HDR formats, including Dolby Vision.

Android 10.0

All Metz blue models come with contemporary Android TV. Thus, access to all applications in the Play Store is free. Essential streaming services such as Netflix, Amazon Prime Video, and Youtube are already pre-installed ex-works. You can simply log in to the respective provider with your access data and stream for an unlimited time. Access to the network is via LAN or wirelessly via Wi-Fi.

Google's voice assistant Google Assistant is, of course, also on board, so relevant content can be found quickly and easily via voice command.

Soundbar

Metz also relies on an integrated, directly emitting soundbar on the lower edge of the blue for sound. It is a 2 x 10-watt stereo speaker system that can also process Dolby Atmos



The soundbar at the bottom ensures good sound and high speech intelligibility

and dts Studio Sound signals. The resulting sound quality is on a high level for a flat TV; especially the critical speech intelligibility is excellent, so voices are not lost in the film music or sound effects.

Image quality

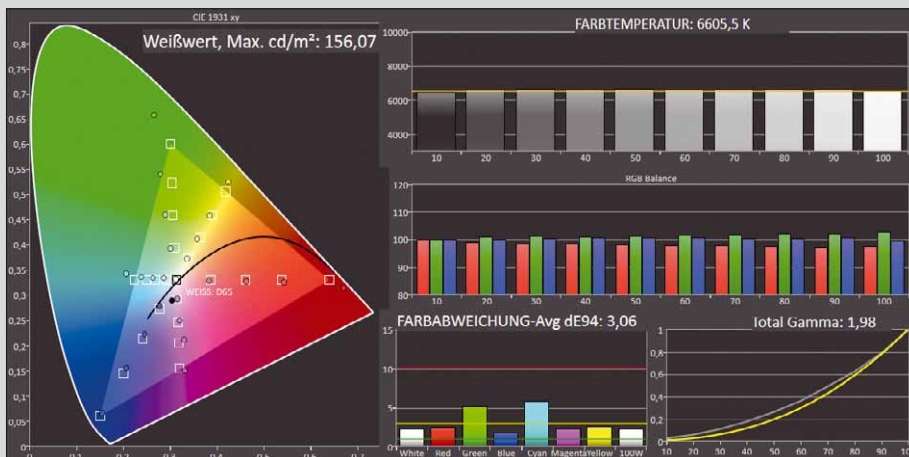
Our optical measurement sensor certifies that the Metz blue has a good calibration ex works in film mode. The color temperature is correct, and the color deviations remain within tolerance. The contrast is very good for an LED TV. Accordingly, the inexpensive TV is also a joy with 4K HDR material from Ultra HD Blu-ray or streaming providers. For example, the impressive space images in Telescope with stark light-dark contrasts are impressively good. No details are lost, and the dark space is just that: dark, although not as perfectly black as on an OLED. Very good: Even the bright control lights of the dashboard in the otherwise dark spaceship do not overshine and do not show any unwanted glow effects. Typical for Metz is that the live TV picture in the standard picture mode is also of above-average quality and pleasantly natural without exaggerated colors.

Conclusion

The 55MUC8001Z offers the usual high Metz quality at an attractive price. Thanks to Android TV, there are no limits to streaming.

Dipl.-Phys. Guido Randerath

HOME CINEMA WORLD Laboratory



The 55MUC8001Z is already well-calibrated in film mode ex-works, so subsequent fine adjustment is hardly necessary. The measurable deviations in green and cyan are still absolutely within the bounds.

Laboratory measurements supported by Portrait Displays with CalMAN software



Price	800 Euro
Distributor	Metz, Zirndorf
Phone	0911 97060
Internet	www.metzblue.com

• **Measurements**

Dimensions with foot (W x H x D, in mm)	1227x761x210
Weight in kg	14,5
Black level (cd/m ²)	0,054
Contrast	3816:1
Color temperature in Kelvin (movie mode)	6606
Power consumption operation / standby in W	93/0,3
EU energy label	G

• **Image**

40 %

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

• **Sound**

5 %

★★★★★

• **Features**

30

★★★★☆

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

• **Built quality**

5 %

★★★★★

• **Operation**

20 %

★★★★★

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

Metz blue 55MUC8001Z

• **Features**

Screen diagonal in inches / cm /	
Resolution	55 / 139 / 3.840 x 2.160
Tuner: DVB-T2 / -C / -S/S2	• / • / •
CI+ interface	•
HDR: HDR10 / HDR10+ / HLG / Dolby	• / - / • / •
HDMI / Scart / Cinch-AV	3 / - / -
HDMI: CEC / ARC	• / •
Audio-out: analog / opt. / koax / ARC	- / • / - / •
Headphone jack	-
Bluetooth	•
Cardreader / LAN / WLAN	- / • / •
USB / Player / Recorder	2 / • / •
Smart-TV system	Android
White balance / color calibration	• / •
Room light sensor	-
Voice / motion control	- / -
Other	• / -

Middle Class 1,1



**HOME
CINEMA**
WORLD

Germany 1/22

Price/performance: Excellent

- + AndroidTV
- + integrated soundbar
- + USB Recording/Timeshift

**AVAILABLE
IN EPAPER
STORES AND**

WWW.LP-INTERNATIONAL.INFO



Issue 1/2022 · 5,90 €



ANALOG HI-FI AND VINYL CULTURE



bergmann

Sound
AV Receiver

Best Buy

**HOME
CINEMA**
WORLD

Germany 1/22



Affordable and Powerful: AV Receiver Denon AVR-X1700H

Powerful Start

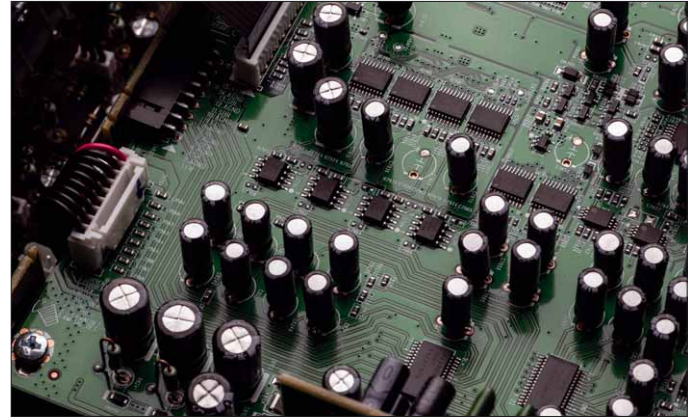
Denon offers the AVR-X1700H for as little as EUR 700. A very attractive price for a 7.2-channel receiver that is technically up to date!



polk



Audio circuits

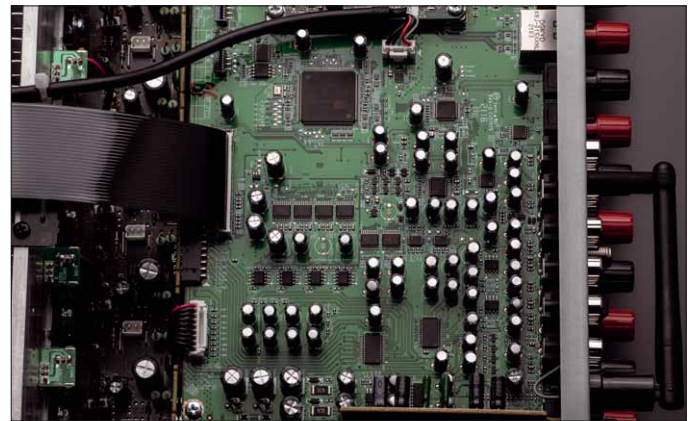


The operational amplifier section

The new „small“ Denon offers seven discrete power amp channels and two subwoofer pre-outs. Combined with active bass drivers, configurations up to 7.2 channels are possible. There is no lack of power. Denon specifies the stereo output into 8-ohm speakers per channel with 80W; we measured 118W RMS. At 4 ohms, our measurement system even confirms a whopping 165 watts per channel. You can play really loud with that - a lot of power for this price.

Future-proof

And the Denon not only convinces with considerable muscles, but it also does not need to hide from some more expensive devices in terms of smarts. It has seven HDMI ports, six inputs, and one output for a TV or projector. Three of the inputs are compatible with 8K resolution, and the output is also. In addition, this one supports eARC. This means that you are also equipped with the AVR-X1700H if you want to upgrade your home cinema system to 8K.



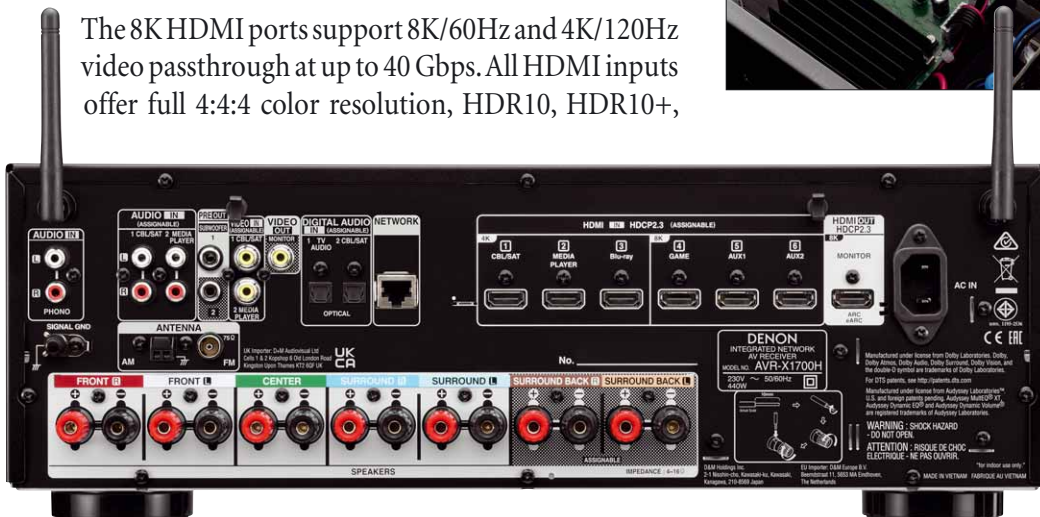
Right picture: Loudspeaker connections

HDCP 2.3

The 8K HDMI ports support 8K/60Hz and 4K/120Hz video passthrough at up to 40 Gbps. All HDMI inputs offer full 4:4:4 color resolution, HDR10, HDR10+,



Thus up to 163 watts per channel are available



Rear view with multiple connection options

On the front are connectors for USB, headphones, and measuring microphone

Three HDMI inputs are 8K compatible



Virtual:X or Dolby Atmos Height Virtualization. Both technologies create virtual height and surround sound effects to simulate immersive sound in 7.1, 5.1, or 2.1 speaker configurations.

Room calibration

The affordable AVR-X1700H also has an automatic calibration known from the larger Denon AV receivers. The necessary microphone is already included in the package and is simply connected to the front of the receiver. The Audyssey MultEQ XT room correction system detects the speakers' size, type, and configuration. It measures the reproduction in the room and optimizes the settings of the DSP to realize the optimal sound result for any given acoustics and set-up. With the Audyssey MultEQ Editor app (EUR 19.99 in the Play Store), further, comprehensive customization options are available.

Network

The receiver is integrated into the home network via LAN or WiFi. HEOS Built-in enables access to streaming services like Spotify, Tidal, or Amazon Music HD, also in Hi-Res. Internet radio is also on board with TuneIn. iOS devices

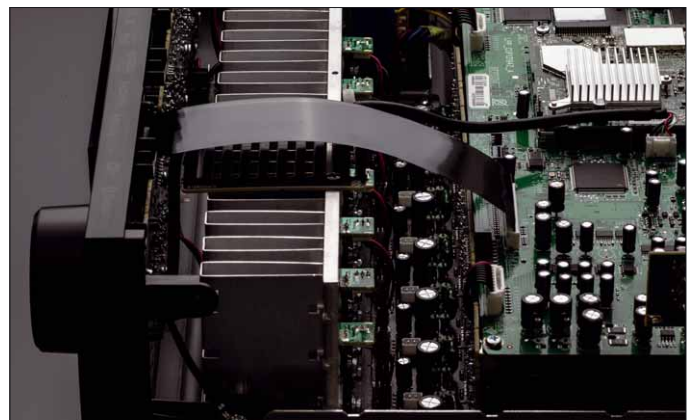
Dolby Vision, Hybrid Log Gamma (HLG), Dynamic HDR, and BT.2020 passthrough for optimal image quality. In addition, 8K upscaling and the latest HDCP 2.3 copy protection standard are available on all inputs. Gamers enjoy smooth and fast gaming thanks to 4K/120Hz passthrough, variable refresh rate (VRR), Quick Frame Transport (QFT), and Auto Low Latency Mode (ALLM), among others.

3D Formats

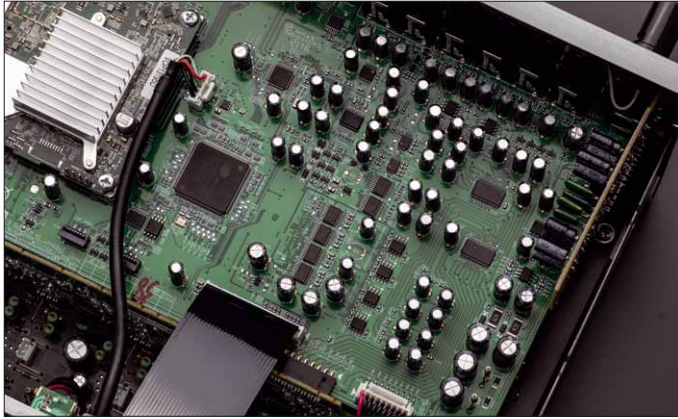
And the Denon masters not only HDR video formats but also immersive sound standards. Dolby Atmos, Dolby Atmos Height Virtualization Technology, DTS:X, and DTS Virtual:X are on board. Thus, you can set up a 5.1.2 Dolby Atmos surround system with the help of height or ceiling speakers or use Dolby Atmos upfiring speakers in addition to the existing speakers. Another option is to use DTS



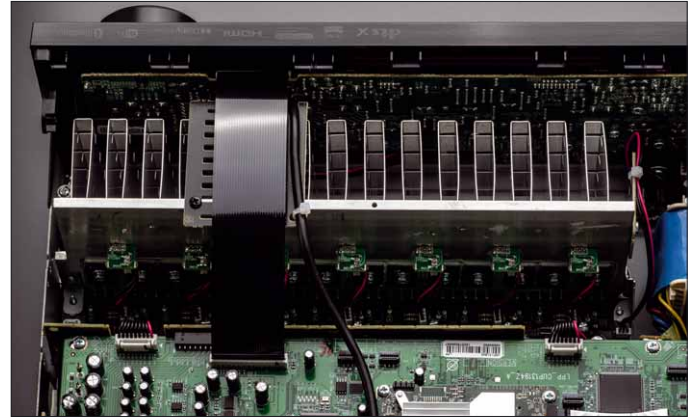
The HEOS module makes the Denon network and multi-room capable



Seven power amplifiers are on board



All electronics are neatly finished



The heatsink ensures efficient heat dissipation

can be connected via AirPlay 2; Android phones and tablets connect via Bluetooth. In addition, the AVR-X1700H can stream music wirelessly to compatible HEOS devices throughout the house, so it can control multi-room systems. For EUR 50 more, the AVR-X1700DAB is also available with a digital radio receiver.

Lab and practice

As mentioned initially, the Denon shines in its price range with a formidable output of up to 163 watts in stereo mode on the test stand. When all seven channels are fully engaged simultaneously, the possible power output per channel naturally drops a bit, but this is rarely relevant in practice. The power amplifiers work powerfully and cleanly: distortion factor, SNR, and other values are flawless, and one can hear that. After a few minutes of Audyssey calibration, the

„small“ Denon really gets going. Even movies with a lot of acoustic action, like Terminator 4, are no problem for the Denon. Dynamics, localization, spatiality - everything fits. At the same time, the sound quality also recommends the AVR-X1700H for music listening in stereo mode.

Conclusion

The Denon AVR-X1700H offers great entertainment for little money. Future-proof technology paired with sufficient power and excellent sound: The ideal AV receiver for beginners or for modernizing the home cinema system.

Dipl.-Phys. Guido Randerath



Both the front and the remote control are tidy



Denon AVR-X1700H

Price	around 700 EUR
Distributor	Sound United, Nettetal
Phone	0215712080
Internet	www.denon.de

• Sound	40 %	★★★★★
• Lab	10 %	★★★★☆
• Practice	25 %	★★★★★
• Features	25 %	★★★★★

• **Measurements**

Dimensions (W x H x D)	434 x 151 x 339mm
Weight	8.6kg
Power stereo (4 Ohm / 8 Ohm)	163 / 118W
SNR	81dB(A)
Channel separation	67dB
distortion factor	0,058%
Power consumption	(Off /Stdby / 2 x 5W)

• **Features**

Power amplifier / Decoder	7 / 7.1
Dolby Atmos / DTS:X / Auro 3D / THX	• / • / - / -
USB formats	up to 192 kHz/24 bit, 5.6 MHz DSD
DSP programs / Auto calibration	• / MultEQ XT
Front connectors (USB / HDMI / Analog / Phones)	• / - / - / •
Inputs Audio (Analog / Phono / opt. / elektr.)	2 / 1 / 2 / 2
Inputs Video (HDMI / FBAS / YUV)	6 / 2 / -
Outputs Audio (Analog / opt. / electr.)	7.2 Preout / - / -
Outputs Video (HDMI / FBAS / YUV)	1 / 1 / -
Multiroom / Bi-Amping	• / •
Streaming / FM Tuner / Internet Radio	• / • / •
Network / Wi-Fi / Bluetooth	• / • / •
Features	8K. HEOS, Audyssey

Upper class 1,0



HOME CINEMA WORLD

Germany 1/22

Price/performance: Outstanding

- + superior performance
- + 8K compatible
- + Room correction

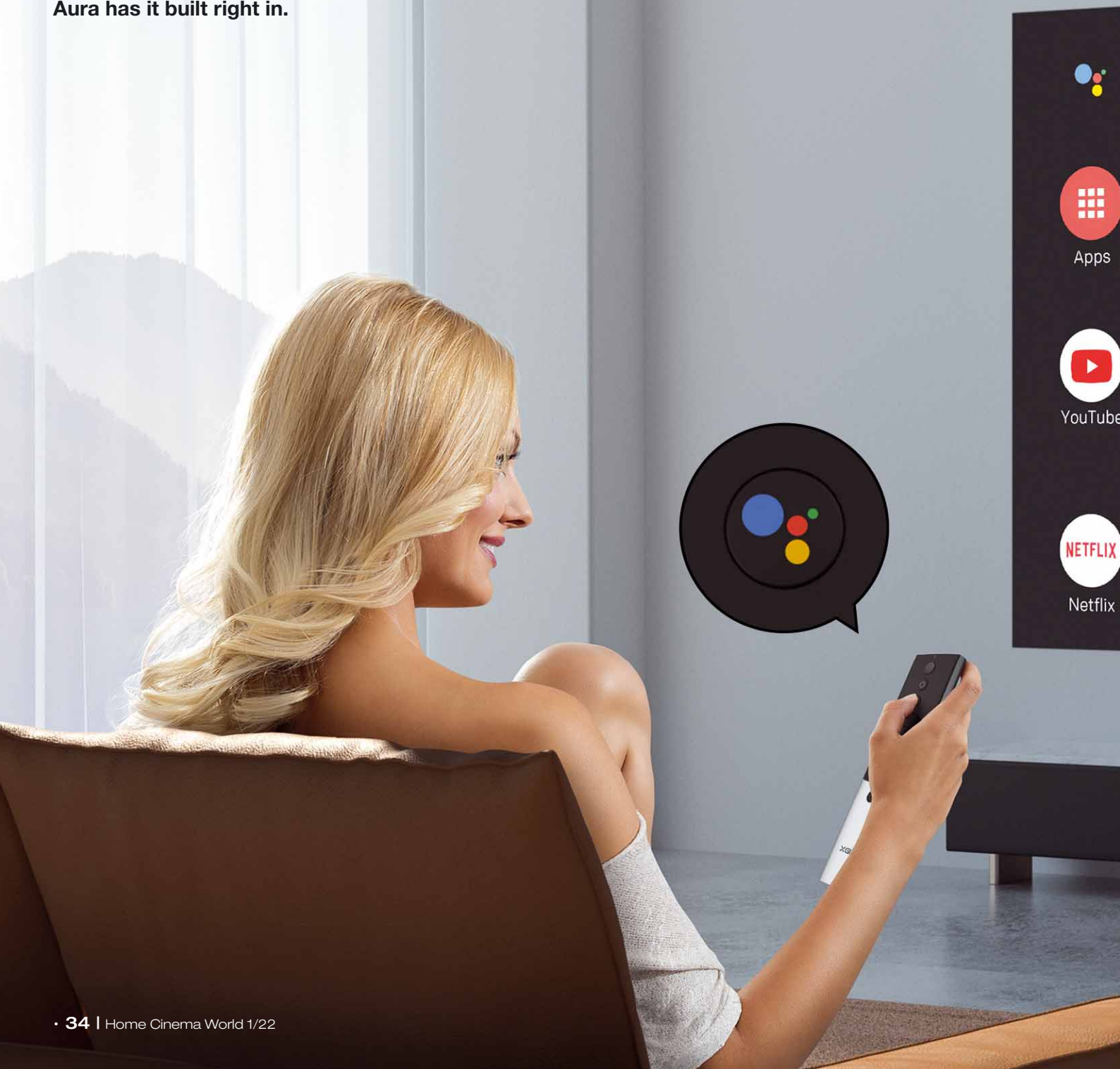
Image

UHD-HDR-DLP-Laser-Ultra-short-distance projector

XGIMI AURA – LaserTV with Android UI

Watch Bigger

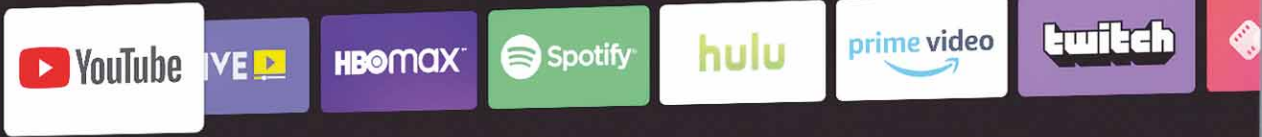
Ultra-short distance projectors are becoming increasingly popular, as they are better suited than any other device to compete with conventional TV sets. The Aura LaserTV from XGimi also projects images of a remarkable 150 inches in size and is only a few centimeters away from the screen. By the way, this is also the ideal location for a soundbar, which is why the Aura has it built right in.



Living room cinema tip



Try searching for "romantic comedies"



YouTube



Image

UHD-HDR-DLP-Laser-Ultra-short-distance projector

Almost all interfaces are located on the back, facing the canvas

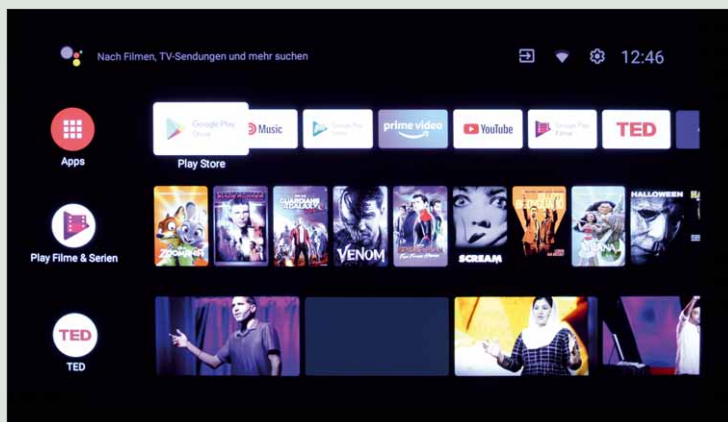


It's hardly surprising that even the somewhat bumpy device term „ultra-short distance projector“ is becoming „laser TV“ more and more often. The preferred light source here is a laser diode, which has a much longer lifespan than the UHP lamp that is otherwise still commonly used in projection. The color reproduction is still stable even after thousands of hours of operation, as is the luminosity. In addition, the laser lamp is easier to cool, which has the positive side effect that a laser projector can be much quieter in operation than its lamp counterpart. XGimi is not the only company to take advantage of the fact that there is still plenty of housing volume for installing a grown-up audio department. As with the mobile projectors from the same company, the expertise of the audio specialists from Harman was called in to give the projector – sorry, I mean the laser TV – an appropriate sound.

Placed in position

Now the laser TV only needs to be set up and connected. Even though setting up the TV requires skill, one person can quickly do it alone. Unlike TVs with a screen diagonal of 65 inches or larger, there's no need to call on a well-trained neighbor or acquaintance. The XGimi is placed about 33

centimeters in front of the screen, which is the distance of the lens. Therefore, the front with the fabric cover of the speakers protrudes another 10 centimeters into the room with about 43 centimeters. With this distance, we achieve a screen width of about one and a half meters, which corresponds to the screen diagonal of a 65-inch TV. With only a few centimeters more distance to the screen, we easily reach a picture diagonal of 90 inches, corresponding to more than two meters. Just for comparison, TVs with such a large picture don't exist yet, and smaller devices already pose considerable transport and setup problems. Here, the Aura once again proves to be particularly easy to maintain; the image sharpness is automatically adjusted with the help of a superimposed test picture. The so-called keystone distortions are also corrected automatically to a large extent. To get it just right, the XGimi even offers a manual 8-point keystone correction. Whether automatic or manual, we made the correction as easy as possible for the device by putting it „in the water“ in our test room: For an exact horizontal placement, the device stands on four feet that can be individually adjusted in height via threaded screws. The more precise the adjustment, the more accurately the picture is aligned afterward, and the less it has to be readjusted automatically or manually.



Android TV is installed as the operating system, and the input line for Google Assistant can be seen at the top



The image and other settings are available via a separate menu



Projection from a short distance is made possible by a combination of wide-angle optics and mirror

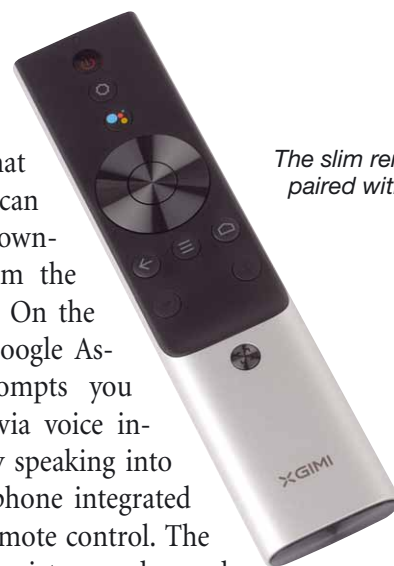
As usual with almost all ultra-short distance projectors, all connections face the screen and thus allow for invisible cabling, provided there is a little distance to the screen. The XGimi also has an easily accessible USB port on the side. An external drive can be connected here that the integrated media player can access. The on/off button is located directly above it, so we can start immediately after positioning the device.

Android TV in large size

After switching on, the XGimi Aura directly boots the Android TV operating system. Every Android user feels right at home and is quickly logged in with the Google account. Besides YouTube, Google Play Movies, waipu.tv, and many other apps, German TV's media library apps are also pre-



The projector focuses automatically. The keystone correction can also be corrected manually at a total of eight individual points



The slim remote control is paired with the projector via Bluetooth

loaded. What is missing can easily be downloaded from the App Store. On the top left, Google Assistant prompts you to search via voice input, ideally speaking into the microphone integrated into the remote control. The settings for picture and sound and the input selection are found on the top right. The corresponding menu is then faded into the screen from the right. You feel like you are using a huge tablet, except that there is no touch control, of course. As mentioned, Google Assistant is available to answer questions, and it does so very quickly. Overall, the menu responds quickly to remote control inputs, and there are hardly any delays even when switching between the projector's settings and the Android interface.

Setup and image quality

The XGimi Aura is designed as a plug-and-play device, at least once the Android interface is set up and the image geometry adjusted. The color management is primarily limited to the presets for the different set-up scenarios



One of the USB ports is conveniently accessible from the side, just below the on/off switch



Behind the fabric cover are the speakers, so the soundbar is built right in

and a somewhat more sophisticated user mode. This at least allows interventions in the color temperature settings. Brightness, contrast, and color saturation can be adjusted individually in each preset.

The XGimi is configured with the „Film“ picture mode, but we found it much too cold at first glance; the picture even has a distinctly bluish cast. After some experimentation, the „Office“ setting seemed closer to our expectations. The subsequent measurement confirmed a color temperature of 7500 Kelvin, which is at least suitable for a living room, but still far from the required 6500 Kelvin. Since the HDTV standard color space is not entirely covered according to our measurements, the color deviations are too large, and the gamma value also leaves something to be desired, we switched to the „User“ picture mode without further ado. After a few adjustments and occasional re-measurements, we were able to get a home cinema-quality picture from the XGimi.

When the Aura is fed with high contrast (HDR) material, it largely adjusts the gamma correction to the required PQ curve. Our previously set values for the color temperature are retained, so we now get an image with great contrasts and crisp colors.

So it's time for a test with live pictures, for which we once again put Marvel's „Black Panther“ into the player. Here, the XGimi can make full use of the crisp image and the audio. The projector succeeds remarkably well in showing off the costumes' rich colors in the vast picture. Deepest blacks alternate with glistening light seemingly effortlessly. Especially in terms of contrast, the XGimi Aura is currently hard to beat.

Conclusion

The XGimi Aura manages to make the TV competition sweat. Thanks to Android TV, streaming services and media players are only a click away, and the apps are always up to date. If XGimi manages to optimize the image settings ex-factory, the Aura will be a genuine TV replacement, not to mention the sound.

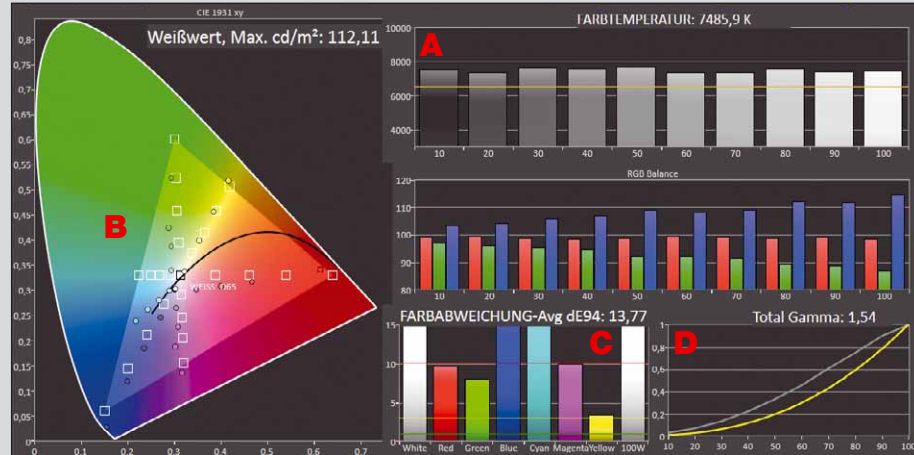
Text: Thomas Johannsen / Fotos: Stephan Schlüter



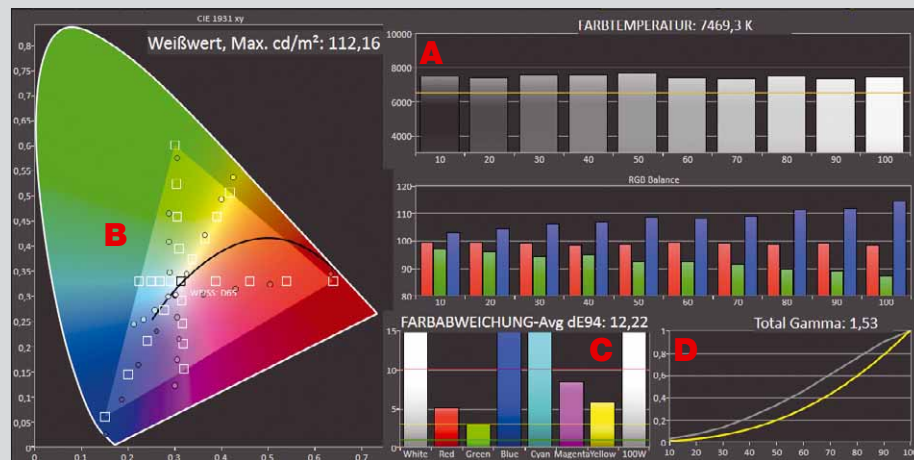
The XGimi Aura conjures up a huge image from its slim case

HOME CINEMA WORLD Laboratory

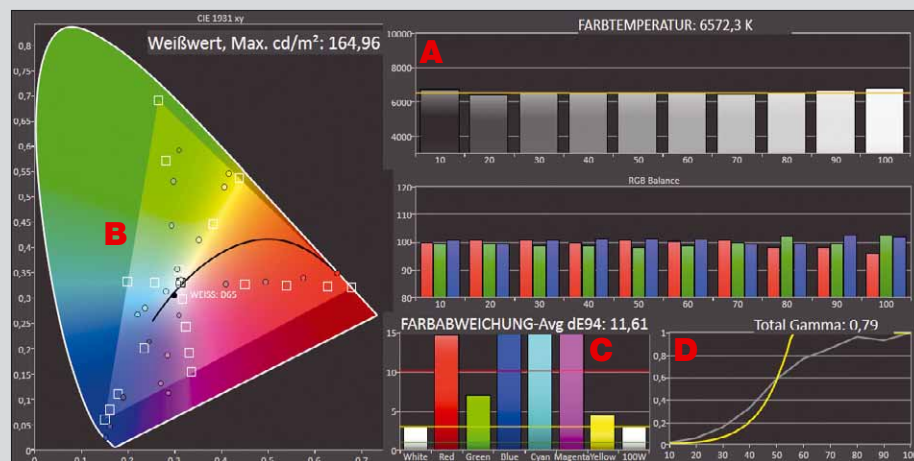
Technology: color reproduction



Since the XGimi Aura is too cold in the preset picture mode „Film“ and has a strong blue cast, we set the device to the picture mode „Office“ without further ado. The color temperature of just under 7500 Kelvin is still relatively high for movies, but that is acceptable in the living room **A**. The BT.709 standard color space is inadequately covered, especially green lacking saturation **B**. The color deviations are clearly above the average. The color deviations are clearly above a DeltaE of 10 and thus simply too high **C**. The gamma curve is relatively flat, and the gamma value of 1.54 is too low **D**.



The only possibility to adjust anything is in the picture mode „User.“ Here, we set the color temperature to „Warm.“ Due to the lack of Eco mode, we set the brightness to 50 percent. Very little has changed in the color temperature, which remains around 7500 Kelvin **A**. The HDTV standard color space BT709 is now covered by almost 100 percent **B** after all. On the other hand, the color deviations have only decreased slightly **C**. There has been virtually no change in the gamma value, and there is only little distortion in the medium brightness levels **D**.



If the XGimi receives HDR content, it automatically adjusts to the required values. In „user mode,“ there is still enough leeway to correct the color temperature. We set red to 70 percent, blue was lowered to 35, and green was slightly raised to 55. The color temperature is now consistently at the desired 6500 Kelvin **A**. When measuring the color space, we deposited the extended D65P3 color space, which the XGimi covers by just under 80 percent **B**. Even now, the color deviations are still just above a DeltaE of 10 **C**. The gamma curve now clearly approaches the required PQ curve **D**.

Laboratory measurements supported by Portrait Displays with CalMAN software

Image

UHD-HDR-DLP-Laser-Ultra-short-distance projector



The XGimi Aura conjures up a huge image from its slim case

Distribution	XGim
Phone	0800 1819363
Internet	www.de.xgimi.com

• Measured values

Lumen (according to the manufacturer Hersteller)	2400
Lumen (measured in Eco mode)	Eco mode not available
Image brightness (at 6500 K)	black/white 0,4 /2300
ANSI contrast	559:1
Full-on- / Full-off contrast	5750:1
Illumination (in %)	91
Operating noise (0,5 m/dB(A), in dB)	<30dB
min. / max. distance (at 2 m image width, in m)	0.46/0.46
Projection ratio / zoom factor	0,233:1/1
Gamma (D65)	0.79
Dimensions (W x H x D in mm)	610 x 140 x 400
Weight (in kg)	14,93
Power consumption Standby / Distribution	<0,3 W/238 W
Lamp type / lamp wattage (in W)	Laser
Price replacement lamp	Not required
Lamp life (in hours) Standard / Eco	25.000
Cost per hour (in Cent)	0

• Image	60 %	★★★★☆
Contrast	10 %	★★★★☆
Color reproduction	10 %	★★★★☆
Sharpness	10 %	★★★★☆
Geometry	10 %	★★★★☆
Noise	10 %	★★★★☆
Image quietness	10 %	★★★★☆
• Practice	15 %	★★★★☆
Zoom factor	5 %	★★★★☆
Fan noise	5 %	★★★★☆
Running costs	5 %	★★★★☆
• Operation	15 %	★★★★☆
Device	5 %	★★★★☆
Remote	5 %	★★★★☆
Menus	5 %	★★★★☆
• Features	5 %	★★★★☆
• Build quality	5 %	★★★★☆

XGIMI AURA

• Features

Projection principle	DLP 0.47"
Native resolution	1920 x 1080 (3840 x 2160 with XPR2 technology)
3D Method	Keystone compensation 8-point multipoint correction, automatic
Full HD	•
Motorized zoom / focus	- / -
Rear pro / Ceiling pro	• / -
Lens shift (manual/motorized)	
Format switching	16:9 (native), switchable to 4:3
Remote control / illuminated	- / -
Signal compatibility	Pal, SECAM, NTSC, UHD, HDTV 720p, 1080i, 1080p, EDTV 480p, 576p
Features	Integrated 2.0 soundbar, Android TV 10.0, LAN and Wi-Fi integrated, Bluetooth

• Connections

Video / S-Video	- / -
VGA / RGB / DVI / HDMI	- / - / - / •
Audio / 12 Volt Trigger / RS-232C	• / - / -

Top Class 1,2



HOME CINEMA

WORLD

Germany 1/22

Price/performance: very good

- + high-contrast picture
- + Android TV installed

Coming soon



Imprint

■ Editor and Publisher:
Michael E. Brieden Verlag GmbH
Gartroper Straße 42, D-47138 Duisburg
Tel.: +49 (0)203 4292-0
Web: www.home-cinema-world.com

■ Editor-in-Chief
Dipl.-Phys. Guido Randerath
e-mail: randerath@brieden.de

■ Editorial management
Dipl.-Phys. Guido Randerath

■ Test and editorial team
Thomas Johannsen (tj), Michael Rochow (mr),
Thomas Schmidt (ts)

■ Test equipment management
Michael Rochow

■ Reader service
Michaela Erkens

■ Ad processing
Heike Pens

■ Media consultant
Oliver Verheyen
Phone: +49 (0)203 4292-112
e-mail: verheyen@brieden.de

Daniela Schwichtenberg
Phone: +49 (0)8856 9107552
e-mail: schwichtenberg@brieden.de

Udo Schulz
Phone: +49 (0)4403 91910
e-mail: u.schulz@brieden.de

■ Photography
Stephan Schlüter

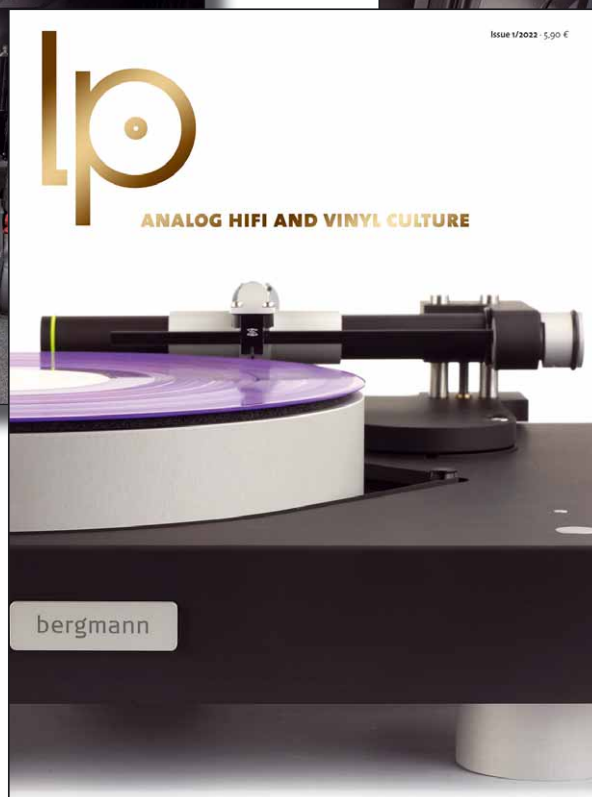
■ Art direction, graphics and layout
Heike Jans, Claudia Hurtienne, Anna Wagner

Note: All rights of publication and reproduction reserved. Some articles contain products that are subject to trademark or patent protection laws without particular reference. If technical know-how or rights of third parties are used commercially, the respective owner's permission must be obtained. No purchase advice by the editors. A functional guarantee for technical references is not assumed. Results in comparative tests are field-related. Manuscript submissions at own risk, without warranty for return or acceptance.

We reserve the right to reprint letters from readers and to make abridgments. Contributions identified by name do not necessarily represent the editorial opinion. Force majeure releases the publisher from the delivery deadline = AD Claims for compensation cannot be accepted in such cases. All rights reserved.

Next issue July 29, 2022

READ IT!



Now available