## Essential High End Munich 2023

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## **FOREWORD**

### Stefan Dreischärf – High End Society



oin us in looking forward to the HIGH END, which will embrace the passion for music for the 40th time this May. In line with this focus, the motto of this year's anniversary event is "Loving Music".

Music is the driving force behind the audio industry, a force able to bring together people from all over the globe. At the HIGH END 2023, we are proud to yet again welcome an exceptional artist who perfectly embodies our motto: the guitar genius Al Di Meola.

With around 550 international exhibitors from more than 40 different countries, the HIGH END is now the world's largest specialist show of its kind and the most important market-place for the global audio industry. What's more, it is also considered to be the mecca of the high-end scene and is an essential date in the calendars of audiophiles and music lovers year after year. Every single person involved in the audio show plays a key

role in ensuring its continued success

Nonetheless, we are also aware that constant development and a future-oriented approach are indispensable in order to remain attractive for both exhibitors and visitors over the years to come. Two B2B days and the IPS, which takes place parallel to the HIGH END, offer additional inspiration and impetus for trade visitors.

On the days on which the event is open to the general public, music lovers and HiFi fans can make the most of excellent demonstrations in the atrium rooms and sound cabins. In addition to the many renowned companies presenting their highlights at the HIGH END, we will also again welcome a number of young start-ups with innovative products.

For our younger visitors, the World of Headphones in its own area in Hall 1 is sure to be a popular destination. Here, visitors can take their time to try out and compare a multitude of different headphone models. Furthermore, we have also put together a diverse programme of talks and presentations by HiFi specialists. This year's HIGH END will be rounded off by a number of panel sessions.

And if all that wasn't enough, visitors may additionally be lucky enough to meet our brand ambassador, Al Di Meola, at the autograph session on Saturday.



THE INTERNATIONAL AUDIO SHOW 18. - 21. MAY AT THE MOC MUNICH





Your favourite UK Audio Show, The North West Audio Show, will take place on the 17th and 18th June 2023 at the fabulous De Vere Estate, Cranage in Cheshire.

It's not just wonderful location and venue, it's also perfectly placed for access by road, rail or air - so wherever in the UK or further afield you are coming from to attend, the North West Audio Show is the ideal setting for what promises to be our biggest and best show ever.

"What makes it brilliant is a combination of factors, from the free entry with a glass of fizz for visitors when they walk in, the incredible welcome and organisation by Kris and his team, the lovely surroundings to the wonderfully enthusiastic exhibitors and the amazing gear that they bring, it really is a delight to attend." Stuart Smith (HiFi PiG)

"It's turning into one of the key events in the UK's audio calendar, with several exhibitors telling me it is becoming a favourite with them..."

"There is also a huge range of offerings, from small one-man boutique makers to large and influential major distributors..." Alan Sircom (HiFi Plus)

CLICK TO BOOK YOUR FREE TICKETS

www.audioshow.co.uk





# VISITOR<br/>INFORMATION

## High End Munich Visitor Information

All the High End Munich 2023 information that you need to get to the show and get the correct ticket. Tickets must be bought online in advance, there are no tickets available on the door at the show.

Thursday and Friday at the show are B2B days for trade and press only.

### **LOCATION:**

MOC Event Center Messe München Lilienthalallee 40 80939 München Germany

## OPENING HOURS & TICKETS

DATE: May 18th to 21st 2023

### **OPENING HOURS:**

Thursday: 10:00am to 6:00pm Friday: 10:00am to 6:00pm Saturday: 10:00am to 6:00pm Sunday: 10:00am to 4:00pm Thursday and Friday only open for trade visitors with pre-registration.

### **TICKETS**

TRADE VISITORS:

2 Days B2B Ticket, valid on both trade

visitor days: 30 EUR

4 Days B2B Ticket, valid from Thursday

to Sunday: 49 EUR

With your B2B ticket you can both visit

the HIGH END and the IPS.

VISITORS:

Day Ticket Saturday: 20 EUR Day Ticket Sunday: 10 EUR

### PUBLIC TRANSPORT

Every ticket for the HIGH END/IPS includes a ticket for public transport. Further information can be found here: MVV-Kombi-Tickets

Ticket purchase online only with pre-registration at the High End Society ticket shop.

### **BUY TICKETS HERE**



THE INTERNATIONAL AUDIO SHOW 18. - 21. MAY AT THE MOC MUNICH









## High End Munich App

The High End Munich App is designed to guide you around the show.

Use it to plan your visit to our audio show from the comfort of your sofa. The app offers a directory of brands, exhibitors or product groups with search function, digital hall plans and much more relevant trade show information. With your own list of favourites, you can also save exhibitors that are particularly interesting to you and then call them up on site, sorted by hall or alphabetically.

Install or update the app for High End Munich 2023

### For Android / Google

play.google.com/store/apps/details?id=com.itrium.highend

### For iOS / Apple

apps.apple.com/en/app/high-end/ id865027440

If you can't access via the links above, please go to the <u>High End Society</u> website here.



HIGHEND munich2023









# WELCOME





# HiFi PiG At High End Munich 2023

Here's what HiFi
PiG will be up to
at this year's High
End Munich. Don't
miss any of it!

his year at Munich High End, as well as giving the event our usual full HiFi PiG attention before, during, and subsequent timely follow-up coverage. We will also be involved in presenting and being part of a couple of things that we've been asked to contribute to by the High-End Society.

# THE FUTURE OF THE AUDIO INDUSTRY PANEL DISCUSSION

First of all, Stuart will be part of a panel of invited guests including Michael Fremer discussing The Future of the Audio Industry. This panel discussion will take place in Room K1A at the MOC from 11:00 to 12:00 on the

Friday.

### **SOUNDS CLEVER**



Secondly, Stu will be presenting a sub €5000 in Room K4 on Thursday 15:00 - 16:00, Friday 13:00 - 14:00 and 17:00 - 18:00, Saturday the 20th at 12:00 to 13:00 and 16:00 - 17:00 and Sunday 13:00 -14:00. The full system (which will include vinyl playback) has been put together to allow it to be easily accessible to families who want great quality and convenience without breaking the bank. As well as presenting the system, Stu will play tunes that have been part of his musical journey from his childhood to the present day. We'll also be giving out HiFi PiG merch at these presentations.

The system Stuart will present is: Turntable: Technics SL 1500

Cartridge: HANA EH

Amplifier: Cambridge Audio AXR100

Speakers: Fyne Audio F501



Tellurium Q











Cables: Atlas Equator speaker cables, Atlas Element Achromatic RCA, and Atlas EOS DD mains cables.

### WOMEN IN HIFI AT HIGH END MUNICH 2023

If you are a woman in the HiFi Industry, or into the hobby of HiFi then you can get together with like-minded women at the annual Women In HiFi Munich meet-up organised by Lin, Mrs HiFi PiG. We get together to socialise, make contacts and discuss business ideas, you are welcome to join us in the beer garden at the MOC (between Halle 3 and Halle 4), on Saturday 20th of May at 5pm.

## WHAT'S BIG, PINK THRUSTS SKYWARD?

Finally, HiFi PiG will have their 4 metre BiG PiG Tower outside the entrance to Hall One at the MOC where we will be giving away HiFi PiG merch on the Saturday between 10:00am and Noon. To get the full benefit of the banners you will need to get up close to them! – all will become clear! Read the small print!

As well as all that Lin and Stu will be joined by our videographer Ben and our German and Benelux correspondent Eric. Say hi when you see us, we love meeting our

### FANtastic HiFi PiG readers!

### HiFi PiG COVERAGE SPONSOR TELLURIUM Q

We would also like to say a massive thank you to our High End Munich 2023 show coverage sponsor, the British cable brand has once again chosen to sponsor the HiFi PiG coverage of this amazing event, you will see their banners on all of our news and aftershow coverage... Click HERE to check out their products!

See you at the show!









# Not Boring HIFI MUSIC CULTURE OPINION.

TATTOOS AND MUSIC
AFRICAN HIP HOP
COSMOTRON SPEAKERS
SLOW MUSIC MOVEMENT
AUDIO REVIEWS
INTERVIEWS
HIFI SHOWS AND VISITS
LIVE MUSIC
AFROBEATS
YOUTH CULTURE
COCKTAILS AND MUSIC
HIFI HOROSCOPES
REEL TO REEL

AND MUCH MORE...

CLICK TO DOWNLOAD





# Food & Drink At High End Munich 2023

## EATING OUT IN MUNICH

After all day at the HiFi Show you are bound to be hungry, after all that walking and listening to great music and HiFi, you will need sustenance.

There are various places to eat in the MOC itself with dishes ranging from sandwiches and light snacks through to proper sit-down menus. There's also lots of places you can get liquid refreshment including the splendid beer garden situated between Hall 3 and Hall 4.

However, once the show is over you will want to head into town and eat and so here is the HiFi PiG guide to eating out in Munich. Of course, these are just suggestions and there are so many wonderful eating and drinking establishments in Munich so you can more or less guarantee to find somewhere even if you are wandering around taking in the sites of the city.

Get away from your hotel in the evening and go explore this wonderful and friendly city and all it has to offer, from the traditional to the more quirky and modern.

### VEGAN AND VEGETARIAN

Despite the Bavarian love of all foods that are pig based it is still pretty easy to eat out if you are vegan or vegetarian.

Here's a handful of restaurants that are either vegan/vegetarian or cater for your needs. Max Pett is a vegan institution and has been open for many years. HiFi PiG thoroughly recommends it and we'll be hopefully getting our vegan schnitzel fix there at some point. It's completely vegan, alcohol free and utterly delicious. You don't need to be fluent in German to understand what the Katzentempel is – yep, it's a café with cats, though not to eat of course, the menu is veggie and vegan!

The Gratitude
Max Pett
Dr Drooly Pizza
Cafe Katzentempel
Erbils
Siggis
Bodhi
Tushita Teehaus

### OTHER RESTAURANTS

For the meat enthusiasts attending the show the choice is vast in Munich but here are what Trip Advisor suggests as being good places to eat. Many of the places listed below are vegetarian friendly but our advice is to check before booking.





Restaurant Pils Corner
Steinheil 16
Zum Durnbraeu
Restaurant Halali
Zwickl - Gastlichkeit am Viktualienmarkt
Zum Alten Markt
Truderinger Wirtshaus
Servus Heidi
Ratskeller Munchen
Augustiner-Keller

## BEER IN MUNICH

Beer is a big tradition in Munich and it isn't unusual, particularly on the Saturday when there is a football match on, to see gangs of people dressed in their traditional lederhosen and pulling carts full of bottles of beer. Sounds like a recipe for disaster, but in all the years we've been going to Munich for the High End Show we've never encountered any hassles with drunk people.

For those new to Munich the Hofbräuhaus is a bit of a must. It's a vast and sprawling brewery and beer hall (or halls) that has Oompah bands playing, huge steins of beer and traditionally dressed women going around selling salty pretzels. They also sell rib sticking food with a limited choice for vegetarians.

Beer in Germany comes in many styles and here's the ones we've encountered most whilst we've visited.

## STYLES OF BEER IN BAVARIA

Weizenbier and Weißbier are the standard German names for wheat beer with Weiß meaning white.

Hefeweizen is an unfiltered wheat beer with "Hefe" being German for yeast. Helles is a malty pale lager from Bavaria and is available pretty much everywhere.

Pilsener is massively popular in Germany and is a pale and hoppy lager.

Dunkel is a dark lager from Bavaria is a sweet and malty beer.
The Germans are very forward thinking and most of the breweries produce at least one non-alcoholic version of their beer.

# SOME OF THE BEER HOUSES IN MUNICH

Hofbräuhaus München Schneider Bräuhaus München Paulaner Bräuhaus Löwenbräukeller Augustiner Bräustuben Zum Flaucher Biergarten Der Pschorr Augustiner Stammhaus

**Essential High End Munich 2023** 



# **Getting Around Munich**

## GETTING AROUND IN MUNICH

The train/underground system of the S and U Bahn in Munich is very safe, clean and easy to navigate. To get to the MOC by underground from the centre of Munich, you want to take the U6 line from Marienplatz, it's easy to remember because you are heading in the same direction as the Bayern-Munich football stadium. Get off at Kieferngarten and then it's a short walk to the MOC...follow the crowds.

The trains get really busy around opening and closing times of the show and if there is a football match on it gets really crazy.

The MOC is in the inner district for the S and U bahn trains.

MVV KOMBI-TICK-ETS (COMBINED TICKETS) FOR THE USE OF PUBLIC TRANSPORT IN MUNICH

All tickets for the HIGH END 2023 and the IPS 2023 trade shows that are ordered in advance can also be used as MVV-Kombi-Tickets, combined tickets for using public transport around Munich.

With these tickets, you can travel to the MOC Event Center conveniently and for free, for example by bus, tram or train, thus avoiding traffic jams or having to search for a parking space.

### DAY TICKETS FOR VISITORS, B2B TICKETS FOR 2 TRADE VISITOR DAYS

As a visitor to our trade shows, you can travel throughout the entire MVV network (Zones M–6). Your purchased day ticket entitles you to a return journey to and from the MOC Event Center in Munich with the public transport run by MVV (S-Bahn/U-Bahn trains, trams and buses) on your chosen day.

EXHIBITOR TICK-ETS, B2B TICKETS FOR 4 DAYS AND MEDIA REPRESENTATIVES



The MVV ticket included in the tickets mentioned above can be used on all four days of the trade show (18th to 21st May, 2023) for any number of journeys on public transport throughout the city of Munich (Zone M).

## IMPORTANT INFORMATION

Please be aware of the following conditions:

Do not separate the Kombi-Ticket: Please do not separate printed tickets. This will ensure that they are recognised as an MVV Kombi-Ticket when checked.

Only valid in combination with photo identification The MVV Kombi-Ticket must contain the full name of the user. The ticket is non-transferable and will only be accepted in combination with valid photo identification. Please ensure that you carry photo identification with you on all journeys with MVV public transport.

If you need to buy MVV tickets for other trips during your stay in Munich, this can be done online or at the station ticket machines. <a href="https://ticketshop.mvv-muenchen.de/index.php/tickets">https://ticketshop.mvv-muenchen.de/index.php/tickets</a>

Taxis are plentiful too, as you would expect in a major city, and we also use Uber in Munich. If the weather is good, then walking is always an option for those of a fitter persuasion.

## AIRPORT SHUTTLE

During the HIGH END and the IPS exhibition, shuttle buses run

between Munich Airport and the event at the MOC Event Centre every 30 minutes.

At the airport, the buses stop at the allocated bus stops at Terminals 1 and 2. Please follow the general signs directing you to the bus stops at the airport.

The shuttle bus service is free of charge for holders of a press ticket, exhibitor ticket or trade visitor ticket. Passengers may be requested to show their tickets.

### **TIMETABLE**

Thursday, May 18, and Friday, May 19, 2023
Airport - MOC 08:00 am - 06:00 pm
MOC - Airport 10:15 am - 07:15 pm
Saturday, May 20, 2023
Airport - MOC 08:00 am - 06:00 pm
MOC - Airport 10:15 am - 07:15 pm
Sunday, May 21, 2023
Airport - MOC 08:00 am - 05:00 pm
MOC - Airport 10:15 am - 05:00 pm
MOC - Airport 10:15 am - 06:15 pm
Airport - MOC - Airport every 30

### **STOPS AND TIMES AIRPORT:**

minutes

Terminal 1, Area Z (central area), 4 minutes later (08:04 and 08:34 ff.)

Terminal 2, 4 minutes earlier (07:56 und 08:26 ff.)

Depending on traffic volumes and passenger numbers, shuttle buses may be delayed in individual cases.





# Diptyque & B.Audio

Audio and Diptyque Audio, the French Touch!

**HALL 2 STAND F08** 

For the High End 2023 show in Munich, manufacturers B.Audio and Diptyque have built a common synergy to offer visitors the experience of an open and natural sound 100% made in France.

### 100% MADE IN FRANCE

The two companies, which were born in the same year, have crossed paths several times and forged close ties as they share the same philosophy and the same quest to create refined sound reproduction devices at the service of live music.

### **B.AUDIO**

Specialising in high-end electronics, B.Audio was created after more than 10 years of research and development by a complementary family team of engineers whose professional experiences enabled them to take a fresh look at the challenges of sound reproduction. Since then B.Audio's products received numerous awards from the international audiophile press and the company is expanding internationally.

## B.AUDIO ALPHA ONE ALL IN ONE AMPLIFIER

This year's Munich trade fair will have a special flavour for B.Audio, which will be unveiling its first all-in-one integrated amplifier. The new Alpha One is the result of the experience gained during the development of the reference range and represents a synthesis of the brand's technological know-how.

The goal was both simple and demanding: combine a high-end amplifier and a cutting-edge DAC in a single enclosure, with comfortable power ratings and passive cooling to ensure silent operation over time. The EX streaming module is also included, offering networking capabilities as well as acoustic correction.

diptyque

**C)**Baudo

() B.audio

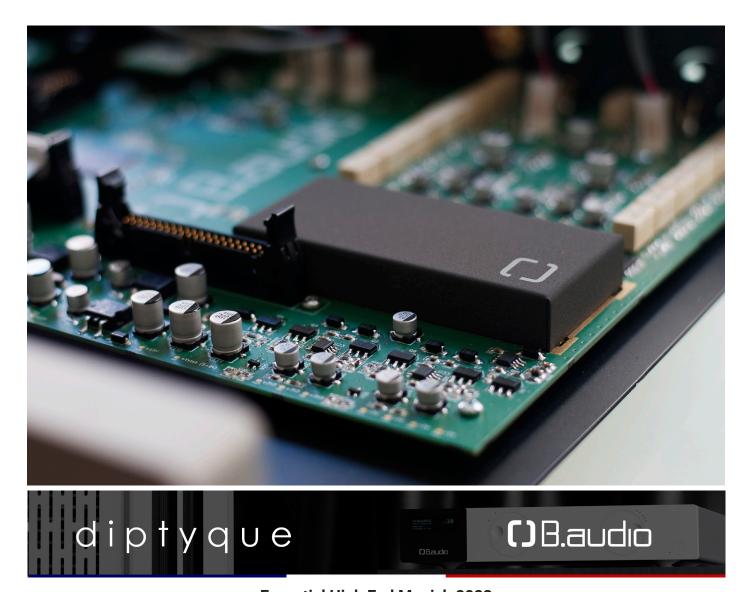
















**DP 140 MK2** 

**DP 160 MK2** 





The B.Audio Alpha One benefits from B.Audio's patented SJR technology. By completely eliminating jitter from any digital source, it allows the conversion circuits to work optimally, ensuring unprecedented digital-to-analog conversion quality, regardless of the digital input format.

The amplifier stage of the Alpha One is directly derived from the brand's power amplifiers. Its dual-mono design provides a comfortable current reserve, allowing to drive the most demanding loudspeakers over the entire spectrum without restriction. All components have been more than generously sized, ensuring a high level of reliability.

The detailed specifications of the B.Audio Alpha One will be announced at High End Munich 2023.

### DIPTYQUE AUDIO

Diptyque Audio is a growing French company, distributed today in 27 countries. It is a flagship company in the field of isodynamic or magnetostatic speakers. Diptyque speakers bring real innovations with two patents that have progressed this technology and which allow them to make an extensive range of Planar speakers which starts with an exceptional quality / price ratio DP77 (€ 4000) and DP107 (€ 6000) Until a high end model, "Reference" with the unique technology "Crossed Push Pull" which met with great success at the last Munich 2022

and AXPONA 2023 shows.

### DIPTYQUE AU-DIO DP140 MK2 LOUDSPEAKERS

Like every year, in Munich, Diptyque has a new model. This year you can listen to the DP140 MK2. A new design, a new structure, optimized PPBM technology and many improvements inspired by the Diptyque Reference. This new model, sober, elegant, refined measures 140cm high.

refined measures 140cm high. They are aimed at demanding music lovers who do not have a very large space and want to enjoy the natural and immersive sound that only high -level Planar speakers are able to reproduce.

Like all models in the Diptyque range, DP140 MK2 can be personalized with a choice of 160 RAL colors and also 4 colors for leather, on the edge.

The DP140 MK2 will be quickly available on the market and announce the arrival of the DP160 MK2 in September.

### HIGH END MUNICH 2023 SYS-TEMS

B.Audio and Diptyque will showcase two systems in Munich this year:

- B.Audio B.dpr EX streaming DAC- preamp & B.amp Mono power amplifiers, Diptyque Reference speakers
- B.Audio Alpha One integrated amplifier, Diptyque DP140 MK2 speakers

# WHERE TO HEAR DIPTYQUE AND B.AUDIO AT THE SHOW

The association of Diptyque speakers and B.audio electronics with Anna Robathin's O2A cables promises superb sonic emotions and should not be missed at the Munich High End 2023 in Hall 2 Stand F08.

www.b-audio.com www.diptygueaudio.com











# Amphion

mphion
Krypton3X

– The Updated 3-Way Flagship Loudspeaker
HALLE 3 BOOTH
M12/N05

The new crossover and tweeter design heightens the full range performance with low distortion in any listening environment.

## EUROPEAN DEBUT OF THE AMPHION KRYPTON3X

Finnish loudspeaker brand Amphion has its European debut of its updated Krypton3X at this month's High End Munich 2023 show. This true full-range floor standing passive speaker delivers strong impact and nuance throughout its frequency range. Since its inception, the goal of the Krypton line has always been to allow listeners

to enjoy a full range, realistic orchestral performances without owning a concert hall. Krypton3X takes it to another level. Amphion's technology and design experience has culminated in bringing this highly innovative update by leveraging a new state-ofthe-art tweeter and low crossover point inside a unique cardioid cabinet design to minimize unwanted reflections making any room fit to handle the Krypton3X. It will be on display alongside the Argon line and Amphion's studio monitor line - including the recently launched One25A, and can be experienced in Halle 3, booth M12/N05 from May 18th through the 21st held at the MOC in Munich.

'The new tweeter and redesigned crossover elevate Krypton3X to achieve even better resolution and even clearer imaging than before.'

### UPDATED DE-SIGN | SUPERIOR SOUND

Krypton3X is Amphion's reference project, now 25 years in the making. The new tweeter and redesigned crossover elevate Krypton3X to achieve even better resolution and even clearer

amphion beautifully honest amphion.fi





















imaging than before. The 25 mm titanium tweeter combines low distortion with high extension and seamlessly integrates with the mid-range drivers to form a large driver combination. High quality components were carefully selected for the new crossover to compliment the new tweeter in order to keep the similar sonic character and tone – but with improved sonics.

"Krypton3X offers full range sound in a room friendly package. The combination of its new tweeter and the dual 8" midranges are intoxicatingly detailed and involving and perform superbly well even in challenging acoustic spaces" says Anssi Hyvönen, the Founder and Managing Director of Amphion Loudspeakers. "We are very proud to introduce the fifth version of our flag ship speaker to our customers."

'The highly innovative cardioid midrange combined with U/D/D – Uniformly Directive Diffusion technology, minimizes unwanted reflections from both side and back walls (up to 20dB).'

### TRUE 3-WAY FULL RANGE

The Krypton3X is a three-way MTM configuration consisting of two carefully placed proprietary-papyrus 8" midrange woofers and titanium tweeter using Amphion's proprietary waveguide technology to create uniform time-accurate point source working from 160Hz upwards. The large surface area creates

an uncanny sense of ease, while achieving clarity and high power-handling with lowest possible levels of distortion. The ribbed 8" driver combines both impact and authority with speed and detail and produces a rare combination nuance and power.

The highly innovative cardioid midrange combined with U/D/D – Uniformly Directive Diffusion technology, minimizes unwanted reflections from both side and back walls (up to 20dB), and allows Krypton3X's to perform exceptionally well even in small rooms or close to large windows. Both midrange drivers work in their own chambers, side vented by holes drilled in the shape of an acute triangle.

'The woofer is hidden behind the cloth cover, which contributes to timeless and understated aesthetics of the Krypton3X.'

To achieve true full range sound, Krypton3X incorporates a 10" side firing woofer. The rigid aluminium cone and long excursion ensure powerful, extended yet controlled bass. The Krypton cabinets can be positioned with the woofers facing inwards, generally a preferred small room placement, or woofers outwards for a broader soundstage in a larger room. The woofer is mounted in the vented enclosure located between the midrange driver's chambers and is hidden behind the cloth cover. which contributes to timeless and understated aesthetics of the Krypton3X.

# AMPHION KRYPTON3X TECHNICAL SPECIFICATIONS

- Three-way vented
- 1" titanium tweeter
- Mid-range— 2 x 8" papyrus drivers
- Woofer— 10" aluminum driver
- Crossover point— 160Hz/ 1600Hz
- Impedance— 4 Ω
- Sensitivity— 89dB
- Frequency response— 21 25,000 Hz +/- 3dB
- Power recommendation 100-300W
- Weight— 70 kg/ 154 lbs
- Measurements— 1370 x 330 x 480 mm

# AMPHION KRYPTON3X PRICE AND AVAILABILITY

The floor standing units are available now in standard white and black veneer for 10,000€ per piece, while the Walnut costs 10,500€ per piece. Prices may vary due to local taxes, shipping, and other additional costs. Please find your local partner here: WHERE TO BUY

For more information on the Krypton3X PLEASE VISIT





### WHERE TO HEAR THE AMPHION AT HIGH END MUNICH 2023

The Amphion Krypton3X will be on display alongside the Argon line and Amphion's studio monitor line – including the recently launched One25A, and can be experienced in Halle 3, booth M12/N05.







## Fink Team

inkTeam
BORG EPISODE 2 loudspeaker launching
at High End Munich

# THE STORY OF THE FINKTEAM BORG EPISODE 2

OK, let's be honest, the original idea was a completely different one. Last year, we sat down with the team in our office, and we thought about what to do next. Our big flagship to follow the WM4 was still under development, and the sales team asked for a model between KIM and BORG.

So the development started, and several prototypes have been made, tested and rejected. Whatever we tried the sound was not good enough, or the price to make it was so high that it would not make sense to produce it. So finally, we decided to skip the mod-

el "in-between". So, you could think we ended up frustrated, but it was really not the case. As we looked into every detail of our existing speakers, we found that we did it right.

So we sat together again and discussed what to do next. And what was the result? FinkTeam BORG EPISODE 2.

The original BORG has been on the market for five years, launched in 2018 at the High-End in Munich. So, what could be improved, using what we have learned in the last five years?

### FINKTEAM BORG EPISODE 2 CABI-NET

Typical loudspeaker cabinets have pronounced structural resonances that are audible and reduce the speaker's 'signal-to-noise ratio'. FinkTeam takes this aspect of loudspeaker performance very seriously because we know that a quiet cabinet allows the reproduction of low-level detail in a recording which is otherwise swamped by spurious cabinet output. Coloration and time smear are reduced, stereo image focus is























improved, and listener fatigue is avoided.

The design emphasis is on panel damping. It is impossible to force all the panel bending resonances above the passband, so instead, they are damped to reduce their amplitude to below audibility. This is achieved using a multilayer construction that combines multi-thickness MDF panels with a damping layer whose internal friction converts vibration into heat. FinkTeam developed algorithms help specify ideal material thicknesses to achieve the best results, but the ultimate determination is made by subjective assessment. Enthusiasts spend thousands buying quieter equipment - products that seem to generate (or not in fact) more space between notes to ultimately have the effect considerably reduced by noisy loudspeaker cabinets.

FinkTeam's COMSOL modelling and Laser Scanning allow prediction and measurement of the results of cabinet design, improving performance while reducing physical iterations. An example of this is the cabinet opening to mount the 10.25 inch mid/ bass driver. Even with the drivers rigidly mounted, there was some unwanted vibration. Almost invisible to the touch test, it was obvious under the laser scanner. A solid metal ring behind the driver mountings solved the problem and hence increased the signalto-noise ratio.

And all this was still true after five years. We tried hard to improve it, but the original construction was still as perfect as it was

originally. However, one thing we changed. Was the original BORG standing upright, we tilted the new BORG EPISODE 2 slightly back. This improves the imaging and sound stage and is something we learned during the development of the KIM speaker.

### MID/BASS UNIT

As one would expect, the midbass driver of Borg is custom designed and manufactured exactly for the purpose. 10.25-inch mid/ bass units are relatively unusual and crossing them well to HF units is not trivial but FinkTeam is relatively unusual: a technical challenge is just a design exercise that may take a little longer to solve. The benefits of a 10.25 inch mid/bass, once heard, are difficult to forget. A level of dynamics and naturalness around voices that is unusual and a richness to the sound without bloom or boom (in a well-designed system) that just sounds right. Smaller 2-way systems sound anaemic after hearing a '10 incher'. The Borg's mid/ bass unit features similar thinking to the WM-4's bass driver: low hysteresis surround (it looks like a pro driver), a large three-inch voice coil for better control and power handling and a light, stiff paper cone. Of course, it includes all the normal FinkTeam design essentials: an aluminium shorting ring on the centre pole to reduce voice coil inductance change with position and to reduce flux variation as a function of voice coil current.

The die-cast aluminium chassis is fully vented for low airspeed, as is

the voice coil former, both reducing distortion and compression. All this brings a dynamic, low-coloration drive unit with high power handling and low thermal compression.

So there was no reason to change the woofer and that's the reason the drive unit is still the same as used in the original BORG.

## FINKTEAM BORG EPISODE 2 TWEETER

The tweeter is an Air Motion Transformer (AMT) operating according to the principles developed by its inventor Oskar Heil. Developed and manufactured in-house by Mundorf and finally assembled at the FinkTeam production place in Essen. The AMT has a strong, 25µm-thick pleated Kapton diaphragm with 50µm aluminium strips. This material has extremely good internal damping, resulting in particularly low distortion. A special etching process was developed to produce it, and the diaphragm configuration was optimised through many tests. Given the 10.25 inch mid/bass unit and a lower-than-average crossover frequency of 1600Hz, a larger AMT driver with a 6464mm2 surface area was ideal. Frequency response easily reaches up to 30kHz while distortion is very low and mainly second harmonic. The AMT's almost constant impedance also facilitates a simplified crossover design (in theory). For the new model, a small modification to the tweet-











er's housing was made to improve the decoupling of the tweeter from the cabinet. Together with the floating screw, it helps avoid any leakage of cabinet vibrations into the tweeter.

**CROSSOVER** 

The crossover is the heart of a passive speaker, and this is exactly where we made the biggest changes for the new generation BORG. The crossover is 4th order acoustic Linkwitz-Riley with a time delay addition between LF and HF. And we still use air cores even for the woofer part (laminated steel core for impedance compensation). A lot of components have been auditioned to find the best combination for the sound character we wanted to create. Those components are not possible to be found by measurements - only our ear can help to select the right one. Did we use, for example, a Polyester based capacitor in the Impedance compensation (150uF), it was replaced with 12 single MKT capacitors in parallel, giving lower losses than a one-piece Polypropylene based capacitor.

The tweeter part of the crossover uses a transformer to adjust the sensitivity of the HF unit to the Woofer level. The tweeter level needs to be reduced by > 6dB, and in the past, this was done by high-quality resistors. That works, of course, but even so, it's not very well-known, resistors in crossovers can change the sound. Working on the big WM4 successor, we started using transformers to adjust levels and the sound improvement was really big. Those transformers (Autoformers) have been using in classic BBC monitors a lot, JBL and TANNOY used them in big monitors, and in all three cases, the transformer not only reduced the level but also acted as a part of the filter. That's also the case in the BORG EPISODE 2 and so, the filter of the AMT was getting a lot simpler compared with the original design. As the transformer not only changes level but also impedance, the main capacitor for the tweeter could get lower in value. This capacitor is essential for the sound quality, and we listened to many different ones, ending up with a new type from Danish specialist DUELUND (PP and Silver Hybrid), paired with a second from MUNDORF. The transformer is made in Germany on an HQ Ferrite

core and potted in wax for the best mechanical damping. The crossover is located in a cavity at the bottom of the cabinet.

### FINKTEAM BORG EPI-SODE 2 CONTROL PANEL

Like the original BORG a terminal plate with separate binding posts for woofer and tweeter is used. The Binding posts are made from Copper, not from the usual Brass. The original BORG used four control switches; the new model got only two controls. The mechanical switches have been replaced with bridges. The decision to reduce the number of controls is based on the experience of five years. The most used control was for the woofer damping, so it is still there. The tweeter and presence control was not easy to use for consumers, so we replaced it with a new HF control that does a combination of both, but not by changing any series resistor or adding capacitors. The middle position is obviously natural, the Plus setting makes the presentation a bit more forward, and the Minus setting gives a more relaxed sound. The lower mid-band one was never used, so we cancelled it altogether. The new front and the new controls, together with a completely new layout, helped reduce the cable length that was needed.

#### **MEASUREMENTS**

A FinkTeam speaker with bad measurements will never hit the market, so the BORG EPISODE 2 is no exception. In fact, it is similar to the original BORG, even so, we changed a lot on the topology of the crossover. Frequency response and distortion figures are almost identical, with slight improvements at the crossover region. The biggest change we have is in the impedance. Due to the transformer in the crossover, the impedance got really big at higher frequencies, so a more complex impedance compensation was necessary, split between woofer crossover and tweeter crossover. These compensations are not critical in terms of components (even so, we still use high-quality parts there), but they offer a constant load of more than 10 Ohms, together with







a low phase shift above 200Hz, making life easy for cables and amplifiers. The sensitivity is 'only' 87dB @ 2.83V, - however, the 'real' sensitivity is higher at 1 Watt.

ken unit with one that fits (only happened once in 5 years, blown amp) All speakers are running in for days, and every pair will be listened to in our listening room by members of the development team.

#### **PRODUCTION**

The FinkTeam BORG EPISODE 2 gets assembled in Germany (Essen, Rommerskirchen). Some parts are made in a European wood factory, but the final production of the cabinets is in-house. The production process is pretty complex and so all steps are documented. A fully equipped KLIPPEL QC system measures every driver and selects matching pairs. The tweeter gets tuned to specifications one by one by hand. The crossover will be tested, of course, and the whole speaker goes through extensive tests. All details are documented, so we could replace a bro-

FinkTeam BORG EDPSODE 2 will retail at 29,900€ incl. VAT in the EU

### WHERE TO HEAR FINK-TEAM BORG EPISODE 2 AT HIGH END MUNICH 2023

Atrium 4.1, E 121





# Totaldac

be at the
High End
Munich show in a
74sqm room, Atrium 4.1, F123.

### FULL TOTALDAC SYSTEM

Come and listen to a full Totaldac system and discover for the first time these new components :

- -d1-sublime DAC from the new unity architecture
- -Amp-1-mk2 amplifier
- -d100%wood speakers with super tweeter option
- ·new unity DAC architecture

# TOTALDAC UNITY DAC ARCHITEC-TURE

The "unity" architecture gives more

presence, more contrast between the timbre of each instrument, more contrast between the size of each instrument, more clarity at the same time as more body and more dynamic. The sound is more realistic and natural giving you more pleasure and no fatigue.

This sound has been adjusted with an analog master tape player as direct comparison and with digital recordings made by Totaldac.

Listening tests were made in the new Totaldac auditorium.

The "unity" architecture allows a better clock distribution, a lower jitter, a lower R2R power supply rail impedance and a lower noise in the digital section.

The R2R ladder resistors are still the famous naked Vishay foil.

The output stage is also fully new, in term of components and in term of schematics, and using discrete components exclusively.

This new output stage produced a 3.5V unbalanced signal and a 7V balanced signal with low impedance for the best versatility, to be connected to all preamps, all integrated amps and also directly to all power amps.



























These new DACs can also integrate the internal streamer board option for a network use.

The new "unity" architecture still allows all Totaldac d1-x DACs to be upgraded to this new architecture.

d1-unity

The d1-unity is the first one-box DAC in the range based on the "unity" architecture, with about 150 components upgraded or added to the electronic boards.

### d1-triunity

The d1-triunity is the highest end one-box DAC in the range based on the "unity" architecture.

The d1-triunity is a d1-unity but with 3 R2R ladders per channel instead of one, giving a lower noise and the real scale of each instrument.

About 290 components are upgraded or added to the electronic boards compared to the previous DAC generations using 3 R2R ladders per channel.

# TOTALDAC D1-SUBLIME FLAGSHIP DAC

The d1-sublime is the new flagship DAC from Totaldac. This time about 680 components are upgraded or added to the electronic boards compared to the previous 3-box DAC generation.

The d1-sublime is a new DAC and

it also includes several accessories, so it becomes a 4-box DAC composed of:

- -2 monobloc DACs
- -1 d1-digital-sublime reclocker
- -1 3-output large-box live-power power supply
- -a custom BNC clock cable
- -a remote control cable
- -a pair of simple AES-EBU cables as a start point, can be upgraded to UP12 cables

This monobloc configuration, proven by the Totaldac d1-twelve DAC, gives even more 3D and more body to the sound compared to the d1-triunity.

### TOTALDAC AMP-1-MK2

The Amp-1-mk2 uses a triode voltage amplifying stage and a high current transistor buffer, to give roughly the best of tubes and transistors, and tuned with a d1-sublime DAC as reference. It has been tested on Magico M6, on the big coax horn system, and on Totaldac d100%wood speakers.

The Magico being moderate efficiency and difficult impedance, the big horn system being 105dB/1W/1m efficiency with easy 80hm impedance, an amplifier giving the best sound in these two opposite environments will work as great with all HiFi speakers.

Specifications of the stereo version:

stereo power amplifier zero global feedback fully discrete design triode main stage and solid state output

class AB with medium level of class A for moderate power consumption and for moderate heat in the room

2500VA, 26kg LIVE-POWER transformer with separate windings for left and right channel separate left/right power supply rectifications and capacitor banks for an almost dual mono configuration (like two monobless in one

for an almost dual mono configuration (like two monoblocs in one chassis)
designed on Magico M6, on a

105dB large coax horn system and on Totaldac speakers

low noise truly tested on very high efficiency speakers

RCA inputs

largest Mundorf binding posts 2x160W under 8ohm 2x300W under 4ohm 2x500W under 2ohm stable under 1ohm

28dB gain

1.5V sensitivity

input impedance: 47Kohm frequency response at -3dB:

0.06Hz to 1MHz

distorsion: 0.05% @ 20W power consumption when music level is moderate: 175Watt @

230V

230mm height 483mm width

453mm depth including connec-

tors

54kg weight

Specifications of the Monobloc version:

XLR input

fully balanced from the XLR input to the speaker output an Amp-1-mk2 monobloc can also

be used as a stereo amplifier with RCA inputs













-height: 1180mm

# TOTALDAC D100%WOOD SPEAKER WITH SUPER TWEETER OPTION

The flagship Totaldac speaker is the d100%wood equipped with the Totaldac super tweeter.

The super tweeter extends the frequency reponse to 40KHz.

There is no cable visible, the super tweeter is simply plugged on top of the speakers and can be removed just as easily for example before a shipment.

#### Specifications:

- -98dB @ 1m @ 2.83V even in bass thanks to two 12inch drivers
- -2.5way: both 12inch drivers are producing bass but only the top driver is producing midrange as well
- -bass cut-off: 25Hz at -6dB in room
- -8ohm average impedance with smooth variations
- -constant directivity horn used only above 3.5KHz
- -equally resolving from top to bottom
- -most of the sound is coming from the top of the speaker, giving it a bookshelf speaker coherency -driver and crossover components from Western
- Europe manufacturers
- -Neodymium bass driver with very high force
- -custom made ultra fast bass/mid driver using a custom wooden frame
- -very extended treble 1 inch compression driver with organic dome
- -crossover made of air coils and selected film capacitors only
- -point to point wiring crossover, no PCB trace is used, only the component legs are used
- -inductor for the bass made of 5mm2 copper wire
- -crossover isolated in its own wooden enclosure
- -Mundorf binding posts for any kind of banana and spade cables
- -cabinet made of 100% massive wood
- -made in France -width: 320mm -depth: 470mm

### totaldac FROM SOURCES TO SPEAKERS



## TOTALDAC AT HIGH END MUNICH 2023

Hear the full Totaldac system in Atrium 4.1, F123



## **PMC**

### MC to introduce new models at High End Munich 2023

PMC will be using High End Munich 2023 to introduce new loudspeaker models that demonstrate why PMCs are the speakers of choice for the world's leading music makers and most discerning audiophiles.

The new PMC Loudspeakers will launch at High End Munich 2023

### NEW PMC LOUDSPEAKERS

The new models are born out of the 30 plus years of research, development, measurement and listening that have gone into the creation of speakers that get as close as possible to what is being played and recorded.

### BRING THE STUDIO HOME

They can trace their lineage back to the PMC QB1 flagship studio monitors. Many of the technologies that were developed for QB1, such as Laminair, have been trickled down into the new models, so users really can 'bring the studio home'.

www.pmc-speakers.com

## PMC AT HIGH END MUNICH 2023

PMC demonstrate the new products in A3.1, D106 from the 18th to the 21st of May.











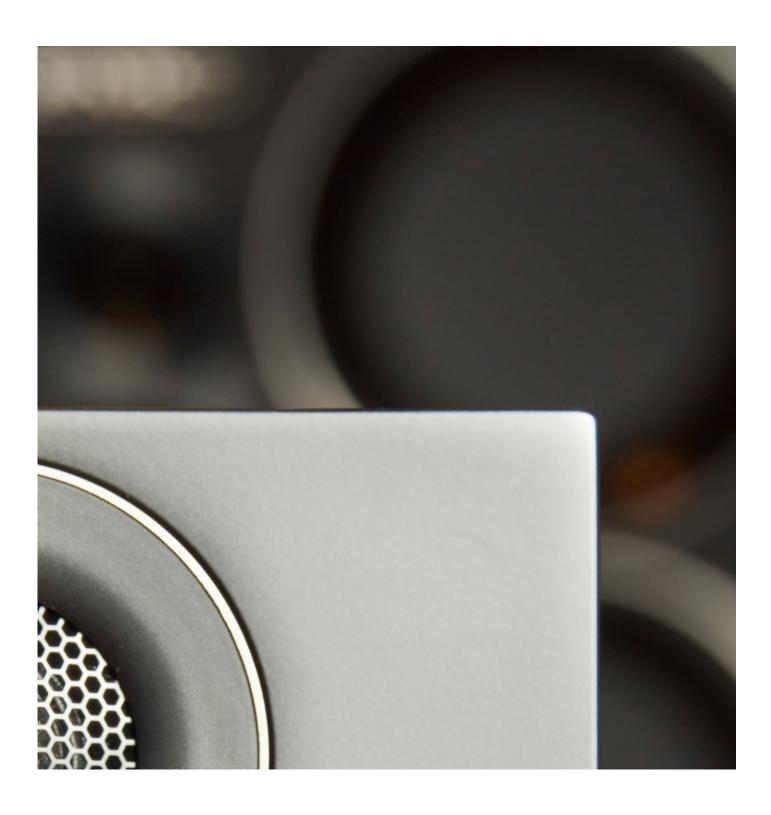
















# Audio-Solutions

udioSolutions Figaro SYSTEM MK2

**Speakers** Launched

### **AUDIOSOLUTIONS** FIGARO MK2

The most successful speaker series ever among AudioSolutions products has been reborn.

The visual change is quite significant as it became much more modern. Believe it or not, the cross-cut of the speaker stayed the same, just as the proportions and many other technical aspects which made Figaro (mk1) a superior speaker in its price range. New Figaro is not only a visual facelift. Despite the fact that the previous version was indeed a ground-breaking speaker in the market, there still was a few things to make it even better, and after five years in production, we gathered enough information about what we would like to improve and launched a major update for this remarkable model.

## **OUTRIGGER**

One of the most awaited updates is the outrigger system with spike support. Not only does the speaker stand more in a more stable fashion, but its footprint on the ground is minimized.

### **DRIVERS AND CROSSOVER**

Figaro now has dedicated bass drivers compared to mid-bass units in the previous version. Sonic response and articulation has improved quite a bit. Updating the Mini-Horn was not necessary but we made slight improvements in it as well. A slightly different geometry gives a bit wider working range, especially in the very top band of the frequency.

Crossovers were updated with thicker wire air-coils as well as a new PCB layout which has slightly less cross-talk. We still use WBT Next-Gen binding posts for Figaro and are planning to add a Bi-Wiring option to larger models.









**Essential High End Munich 2023** 











**Essential High End Munich 2023** 











### AUDIOSOLU-TIONS FIGARO MK2 CABINET

The most important and biggest update is of course in the cabinet structure itself. In the previous version, we used a Self-Locking cabinet which was a breakthrough in our manufacturing.

It was seen for the first time when we introduced it in the Overture MK2 speakers during Warsaw Audio Video Show 2015. It was a very promising technology that was developed further for more than three years. After updates in the Self-Locking cabinet, we introduced it in the Figaro MK1 speaker in 2018 and the final result was unbelievably good.

After such success, we encouraged ourselves to think more out of the box and step even further. We quietly started to work with a completely different approach which does not bind the cabinet to one monomythical structure but rather has some plasticity between different mass and density surfaces which converts vibra-

tion energy to heat in the junction between two surfaces. This technology proved itself to have much more potential from the very first tests. After just about 1and a half years we already had a fully working new cabinet structure which we introduced in the Virtuoso series in 2019 it is called Cabinet-In-a-Cabinet (CIC) system. This system proved to have such a huge potential that we decided to stop developing a Self-Locking cabinet any further and sink ourselves into developing a Cabinet-In-a-Cabinet system. Figaro Mk2 right now features a fully functional Cabinet-In-a-Cabinet (CIC) enclosure directly taken from a much more expensive speaker series – Virtuoso. This is the major and most significant update for new Figaro speakers.

### AUDIOSOLU-TIONS FIGARO MK2 SPECS

Technical parameters for the pair which will be exhibited at Munich high-end show:

Dimensions (HxWxD): 1138mm x 270mm (396mm with outriggers)

x 472mm

Weight: 45 kg/90 lbs each Shipping weight: 49 kg/99 lbs

eacr

Sensitivity: 91.5 dB @ 2.83V 1m Nominal power handling: 170 W

rms

Maximum unclipped power handling: 240 W:

dling: 340 W;

Impedance: nominal 4,0 ohms Crossover frequency: 400 Hz; 4000 Hz

Frequency response (in-room environment): 30-25000 Hz Drivers: 2,5cm silk dome tweeter, 15.2cm ER paper cone mid, two 18.3cm ER paper cone bass drivers

### HEAR AUDIO-SOLUTIONS AT HIGH END MUNICH 2023

They will be in Hall 3 K09



# Funk Firm

unich 2023 and going forward... It's all about The Isolation Bubble.

### FUNK FIRM ISOLA-TION BUBBLE

Or, "Listen to your records, NOT the deck"

Arthur Khoubesserian, owner of The Funk Firm and Pink Triangle has had a long-standing and very simple message: "I want you to enjoy record reproduction better than you have ever heard it before".

Well, that's quite a nice message, but there's more: "By that, I mean I want your records to sound as close as possible to the master tape from which they're cut".

Now, that's quite an ambition and you might be thinking: "That's all well

and good, but I only have a modest deck and a limited budget and you're talking about the very best in sound quality. I've read the mags and asked dealers and they tell me that I need to spend 10,000-15,000€ on a new deck to get more".

With that in mind, there is one last bit: I want you to be able to achieve those aims as far as possible, using your existing deck. Yes, almost whatever turntable it is!"

Not surprisingly that aspiration hasn't ever been heard before. Firstly, manufacturers and dealers are in business to sell you new decks, their deck, and with it to hear their version of "the best" - that's not necessarily the same as master tape "best", else they'd already be talking about master tapes, which they are not! Are you getting the idea?

Well, what if we told you that you don't need to spend that 15,000€? Even if your deck costs only 300€, or it's a vintage model, PL12D, say, generally speaking, with Isolation Bubble, spending just 800€, you can fix the major problems and if the problems are fixed, what's left is good. You'll start to approach and enjoy that master tape sound, notably so.





THE HOME OF ISOLATION BUBBLE

































### THE ISOLATION BUBBLE THEORY

Arthur Khoubesserian is a physicist. He's developed the Isolation Bubble theory. Analysing turntables, he found common weaknesses: Rubbish mats (felt or rubber), resonant arms, hard feet that transmit energy etc. Applying Isolation Bubble's principles, they can remedied for far less than buying a new deck, plus you get better results. The resulting really good sound is available to all, which given that the majority of decks are modest, and most people's budgets limited, especially these days, is good news.

It's a refreshingly pretty common sense approach.

#### **FUNK FIRM SOUNDS CLEVER**

Isolation Bubble is available as a straightforward, no-nonsense document that can be downloaded from the website. It explains all matters vinyl and from there you can see how easily you can benefit and at Munich in room F232, Isolation Bubble will be demonstrated as part of "Sounds Clever".

The system has to cost < 5000€. ATOL 200 signature amp, Dynaudio emit 20 bookshelf speakers leaves some 2000€ spare. Which turntable? SL1200GR? Rega P6? Project Debut?

In the end we chose Audio Technica's ever popular AT120XUSB. At 300€ it's at the lower end of the buying spectrum and can hardly

be regarded as the last word in vinyl replay. Recalling that a bit of fairy dust never did Cinderella any harm, let's see (and hear) what a bit of Funk's Isolation Bubble fairy dust achieves:

For this setup: APM mat. Achromat matches the disc. APM's glass kills platter resonances as well as if not more so than 1200G/GAE's platter. A 300€ deck matching the big boys already! External junk? Isolate with Bongs. A new rigid arm would be nice, but in common with many decks this isn't possible here. (arms would add between 1200-2500€). We've had to content ourselves by fitting AT's 540ML onto the multi-award winning Houdini on the Cobra headshell.

(Houdini has just won another award in HiFi Plus for top "accessory". Accessory is a term we object to, and no, we're not being picky: A record brush doesn't affect the sound. It IS an "Accessory". By contrast, a "component" DOES change the sound, and like Houdini, very much for the better! Thus an amp, a pair of speakers... Houdini, Achromat and so on, should be heard all in the same breath.)

Upgrades range up to 5800€ so 800€ for this upgrade + 300€ TT + cartridge. Total 1400€ is not extravagant. Does it make sense?

Using the same cartridge, (using the same cartridge is only fair), we're happy to compare this still very modest setup to say 1200G/GAE or P10, each > 5000€ or even more expensive setups.

Spend less, get more. Because upgrading works, dealers make less money selling upgrades, so they don't offer it. NO other manufacturer wants this for your musical enjoyment – if they did, they'd be talking about Master Tape sound, yet AK's been talking about it since 1979. For 40 years, sonically, you've been losing out!

At the show there will be information on more of Funk's upgrade options:

LP12, Thorens TD150/160/166; Rega; Technics 1500C / 1200; Pioneer PLX1000 / PL12D, GL75. PINK TRIANGLE 7TH HEAVEN Alongside the "Sounds Clever" system, Pink Triangle will be showing off its delectable 7th Heaven offering, complete with the new FZ reference arm. Yes, another "reference", a term that is getting bandied about like "monitor" in loudspeakers. We'll leave you to judge.

First, 7th Heaven. Like a Merc, all the technical bits are "under the bonnet" and should simply be taken for granted, but:

- A hand lapped, ultra-close tolerance bearing for a quiet background.
- K-Drive precisely controls the motor which is remarkably cog free. The result is it gives 7th Heaven the lowest wow, flutter and rumble possible.
- Funk's renowned Vector drive has a new twin-race pulley design to provide a flutter-free feed of the belt, reducing the already impressive wow performance.
- The ultra-thin section Strata derived low inertia platter responds





THE HOME OF ISOLATION BUBBLE































to the motor's control yet is remarkably non-resonant whilst providing the necessary inert platform for the record. Of course, Achromat is the interface.

- True to Pink Triangle's ethos, 7th Heaven is of course isolated from outside feedback.

The unique, hand-crafted plinth is for people who don't want an oil rig in their living room. 7th Heaven's colour can be user defined – Black Lagoon, White Lotus, Yellow River and more, complement existing décor.

The fact that no two will be the same, provides a unique pride of ownership.

#### **FUNK FIRM FZ TONEARM**

Onto FZ. Most arms (99.9% +) have resonant signatures of some 20-40dB, Funk developed F•X beam technology and FX3's incredible 6dB already delivers a wide, open, and deep soundstage. It has received numerous awards.

FZ takes F•X technology to its limit. FZ has a new, totally re-worked complex internal structure whose modes are actually in the noise floor. NO other arm can better it but at 5000€, FZ is comparatively tremendous value. Why is it so "cheap"? Well, we could charge 20,000-50,000€ +... Need we say more?

There is, however, yet more to FZ.

Competitors' arms may be comparably rigid but come in at a backbreaking 64g+! effective mass. Just what cartridges match these values? FZ's clever, narrow beam design has a real-world effective mass of just 18g. Compatibility with real-world cartridges is assured. Just how sensible is that? Is FZ a "reference" now? Seems reasonable, but let's now throw into the mix that FZ has one new additional design development that makes it truly unique.

Isolation Bubble's ethos is about keep energy away from the cartridge. The arm connects it to the outside world and so "AE energy rejection" has been developed. This is a totally new, unique, energy rejecting system.

NO other arm has this.

No resonance. Real-world cartridge compatibility plus AE energy rejection make FZ the world's only, truly passive cartridge supporting platform, supporting our contention that FZ is the reference. Matching Master tape just got closer.

7th Heaven, FZ, multi-award winning Houdini... the cartridge? AT's 600€, VM760SLC is modest indeed. It goes through our unique, award winning Akutrak – the world's only dynamic response correcting phono stage. Because cartridges need correction, we regard the phono stage as part of the Isolation Bubble system.

With a 14,000€ front end, at Munich, you'd expect a comparably lavish system, but that would de-value the concept of the importance of Isolation Bubble - getting a master tape sound / feel. So, come in have a look at 900€ of speaker (inc sub, of course) off Ebay(!), and then close your eyes, relax and listen. We leave it to 7th Heaven to do the talking.

Getting close to the master tape seemed such a simple aim but this problem has lasted over 100 years. The challenges have not proved straight forward to solve. Isolation Bubble has solved it.

Whether in a modest system or ultimate high end, Isolation bubble's revolutionary approach not only deals effectively with it but for the millions of long suffering vinyl loving enthusiasts it delivers incredibly cost effective solutions.

Certainly there is a lot to Funk and Pink Triangle. Come, learn and enjoy the results.

We never forget, "Our growth results only from your satisfaction".

## THE FUNK FIRM AT HIGH END MUNICH 2023

In room A4.2 F232, Isolation Bubble will be demonstrated as part of "Sounds Clever".





THE HOME OF ISOLATION BUBBLE







## AUDIO GROUP DENMARK

resen Ansuz and Aavik all present new products at Munich.

### AUDIO GROUP DENMARK AT HIGH END MUNICH 2023

Audio Group Denmark are bringing a lot of new gear to High End Munich 2023. The new brand Axxess, three new Børresen loudspeaker models, a third generation of Ansuz equipment, and the new Aavik SD-880 Streamer/DAC.

Audio Group Denmark's design and development team, led by Michael Børresen and Flemming Erik Rasmussen, has been working on a variety of new and highly innovative products. Audio Group Denmark is very much

looking forward to showcasing all these brilliant audio highlights at High End Munich 2023.

## THE NEW BRAND: AXXESS

The High End Munich 2023 will be the official world premiere of our new brand Axxess on the European continent.

The launch of Axxess embodies Audio Group Denmark's founders Lars Kristensen and Michael Børresen's quest for authentic and emotional musical moments, and their vision to share these kinds of precious moments with even more people.

Axxess consists of innovative, high-quality audio equipment that will be available at a more modest price than Ansuz, Aavik and Børresen's equipment. But when it comes to musical performance and aesthetic design, the new Axxess series features the same outstanding acoustic qualities that have made the other three brands so unique.

An additional brand means a need for more display space. Therefore, this year we have three Superior Demo

HALLE 4 - T03/T04 AT THE MAIN ENTRANCE

AUDIO GROUP DENMARK 🤇



















HALLE 4 - T03/T04 AT THE MAIN ENTRANCE

AUDIO GROUP DENMARK

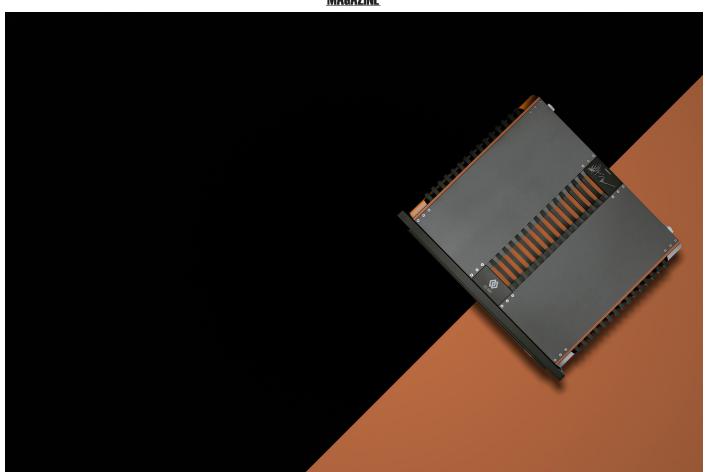














HALLE 4 - T03/T04 AT THE MAIN ENTRANCE

**AUDIO GROUP DENMARK** 











Cabins, one more than last year. Despite the increase in our space, however, we will be in exactly the same location as last year, directly at the main entrance to Hall Four.

### **AXXESS' FIRST PRODUCT SERIES: AXXESS FORTÉ**

Audio Group Denmark is introducing the first Axxess product series, Axxess Forté, which will also be on display in Munich. Axxess Forté is a streaming amplifier series that comes in three versions, Axxess Forté 1, 2 and 3. Axxess Forté stands out for its versatility in terms of its multifunctional features. It has a streamer and a DAC section, as well as an integrated amplifier and a headphone amplifier. Utilizing Audio Group Denmark's renowned development traditions in noise reduction and resonance control, and its overall pioneering approach to technological innovation, Axxess manifests its commitment to Audio Group Denmark's values in producing hi-fi equipment that offers unsurpassed musical authenticity.

THE NEW FLAG-SHIP SERIES OF LOUDSPEAKERS: **BØRRESEN M3** AND M6

The creation of the Børresen M1 loudspeaker was a dream project for chief designer Michael Børresen, but also the most ambitious loudspeaker project to date. The development approach and design philosophy for the M1 was to create a loudspeaker without economic and technological constraints and with unrivalled sound potential.

We had the great pleasure of presenting the prototype of the Børresen M1 in Munich last year and have since successfully brought it to market. Now, we are ready to expand this dream project with two more M series loudspeaker models, the M3 and the M6, and what better occasion to do so than High End Munich 2023. The technologies of the M3 and M6 are the same as those of the M1. However, one obvious difference between the M1, and the new M3 and M6 is the larger cabinet size and shape, which allows the use of more driver units. The M3 is equipped with 4 unique 4.5" M-series speaker drivers. These drivers are connected in series in pairs so that one pair acts as a bass/midrange and another pair acts as a bass speaker driver. The same principle applies to the M6, which features 6 unique 4.5" M-series speaker drivers. These drivers are connected in series so that two units work together as bass/midrange drivers and the other 4 units work together as bass speaker drivers. This approach ultimately results in increased speed, precision, and depth, which enriches the speaker with much more musicality.

The larger cabinet has also im-

proved the ventilation behind the bass/midrange drivers. This provides less compression and thus a much faster and more agile speaker driver, which has a significantly positive impact on the overall sound image. Furthermore, the bass speaker drivers are equipped with a bass reflex section inside the cabinet, which ensures a dynamic and harmonious balance between midrange and bass.

Both the M3 and M6 designs are inspired by the M1 loudspeaker and are a logical extension of design elements that have proven to be not only aesthetically pleasing, but also effective in terms of audio performance.

The Børresen M3 and M6 loudspeakers are an impressive example of Audio Group Denmark's commitment to creating aesthetic design that enhances musical performance. A distinctive feature of the cabinet design is the recess on the back, which has a curved shape. This design element is inspired by the Børresen speaker stand and adds an additional touch of sophistication to the overall aesthetic of the speaker.

The base of the speaker has been specially prepared for Ansuz Darkz, a technology that helps to better control resonance. This attention to detail not only improves the speaker's sound quality, but also adds to its visual appeal.

Overall, the M3 and M6 speakers are the perfect blend of form and function, which reflects the excellent and highly productive

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partnership between two great minds in the audio industry - Michael Børresen and Flemming Erik Rasmussen. The sleek and elegant design of these speakers, combined with their outstanding audio performance, makes them a testament to Audio Group Denmark's commitment to audio excellence.

### THE NEW X-SERIES OF LOUDSPEAKERS: BØR-**RESEN X6**

A year ago, at High End Munich 2022, we proudly presented the first speaker in the X-series, the Børresen X3. The introduction of this new speaker series also marked the establishment of a new intro level in the Børresen speaker universe, serving as a clear manifestation of Audio Group Denmark's vision to bring more people closer to music.

The task for Michael Børresen and his design team was to create a speaker series intended for a lower price segment, making their speakers accessible to more people, but still with the characteristic Børresen DNA and quality standards. To do this, they had to figure out which technologies and components from existing speaker models had the greatest positive impact on performance and which guaranteed the familiar Børresen qualities. The next task was to figure out how to make them more cost-effective without compromising the essence of the Børresen DNA.

We never doubted the unique qualities and unsurpassed performance of the X3 loudspeaker, but the enormously positive response from the hi-fi press, not to mention the feedback from audiophiles around the world, has been really overwhelming. At this year's High End Munich, we proudly expand the X-series loudspeaker range and introduce the Børresen X6. The X6 speaker features the Børresen ribbon tweeter and is equipped with 6 of the 4.5" X-series drivers. Compared to the X3 speaker, all technical elements are the same in the X6. The main difference is the larger cabinet, which allows the use of more driver units. These drivers are interconnected so that two units work together as bass/

midrange and 4 units work together as bass speaker drivers. Similar to the M-series speakers, this approach ultimately results in increased speed, precision and depth enriching the speaker with much more musicality.

It is therefore a great pleasure for us to announce that at High End Munich 2023, we will once again be introducing a new X-series loudspeaker, the Børresen X6.

### THE NEXT GENERATION: **ANSUZ POWER** DISTRIBUTORS AND **POWERSWITCHES**

Audio Group Denmark is very pleased to present in Munich the third generation of the Ansuz PowerSwitch series and Mainz8 Power Distributors, a result of the dedicated and persistent pursuit of ultimate, flawless sound quality.

In Ansuz' quest to unlock the full acoustic potential of music, our engineers are constantly working on further technological advancements, based on an open-minded, innovative approach. The result is a creative and valuable development of unconventional audio technologies and designs that revolutionize the quality standards of high-end music reproduction. This continuous technological evolution means for Ansuz it is time to adopt and integrate these groundbreaking technological advances into a new generation of Ansuz PowerSwitches and Mainz8 Power Distributors. Again, Ansuz sets new standards for highest noise reduction and resonance control.

### THE NEW ANSUZ GOLD SIGNATURE SERIES

Ansuz PowerBox, PowerSwitch and Mainz8 Power Distributor DT-C Gold signature. This year, at the High End Munich, Ansuz presents in addition to

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the Ansuz Gold Signature cables introduced last year, the new Ansuz D-TC Gold Signature Power-Box, Powerswitch and Mainz8 Power Distributor. These products offer even more ways to elevate any audio system to a level of high-end performance never achieved before. The development of this new series was driven by Ansuz's innate curiosity and experimental approach to new product development as well as its unwavering commitment to innovation.

AAVIK'S FLAGSHIP STREAMER/DAC UNIT: THE AAVIK SD-880

In 2022, we began to release the highly anticipated 880 series, a collection of high-end audio products developed in close collaboration between Michael Børresen and Flemming Erik Rasmussen.

At the upcoming High End Munich, Aavik will introduce the newest member of the 880 series - the Aavik SD-880. The SD-880 is Aavik's flagship streamer/DAC device and is designed to deliver exceptional musical performance with minimal noise. By integrating the streamer and DAC into a single device, any loss of musical information is avoided. The new Aavik DAC is a non-switching continuum processing

DAC that effectively eliminates problems with time delays and unwanted noise.

To further enhance the musical experience, the incoming signal from the streamer to the DAC is sampled at an impressive 22 MHz, minimizing the influence of noise on the music signal. Ansuz noise reduction Tesla coil technology is utilized to eliminate any remaining noise, resulting in a captivating and immersive musical soundscape.

The SD-880's streamer module is a dedicated audio unit, specially designed with high-quality capacitors and without the use of microcomputers. This configuration allows for a powerful signal processing system that significantly reduces unwanted noise.

# HEAR AUDIO GROUP DENMARK AT HIGH END MUNICH

All four Audio Group Denmark brands can be found directly at the main entrance to Hall Four. Stands/cabins T03/T04.

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