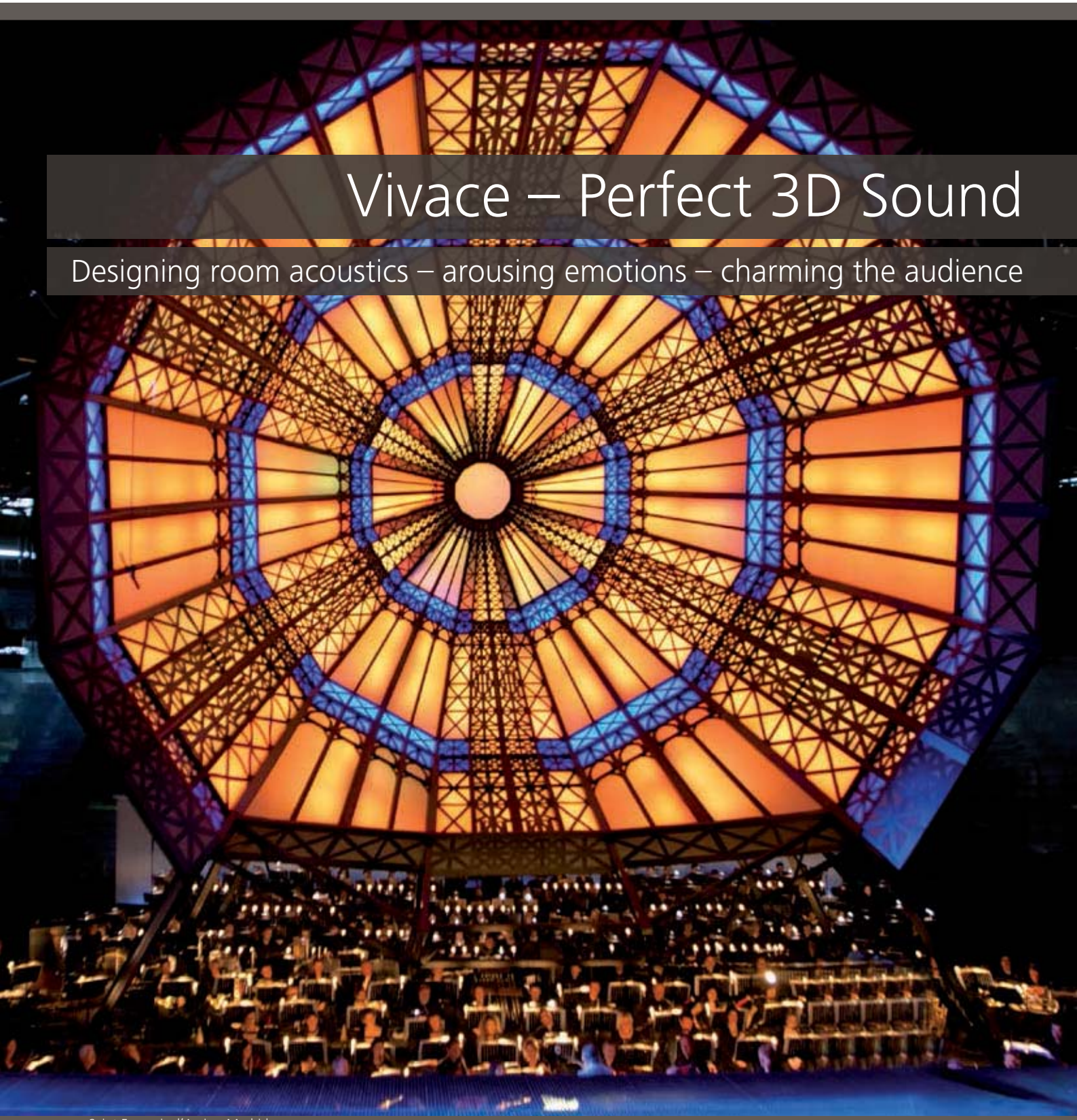
Vivace

Vivace – Perfect 3D Sound

Designing room acoustics – arousing emotions – charming the audience



Saint François d'Assise, Madrid

www.muellerbbm-aso.de

Dalian International Conference Center, China

Vivace – Raumklang reinvented

Not only does Vivace wake music to life – it is an electronic room enhancement system that goes way beyond conventional systems for assisted reverberation with its possibilities and technical features.

Optimised room acoustics

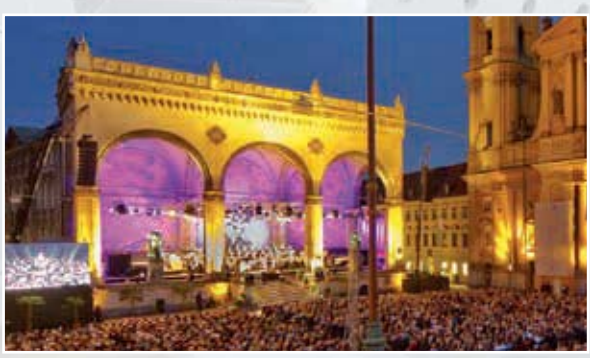
Vivace allows for custom-made amendments to the elemental room acoustic situation of event venues by means of electro-acoustics – and, to boot, in excellent quality while meeting highest demands. This embraces that the entire tonal fine structure of room acoustics is brought into perfection, just in line with the most wishful artists' dreams. The thus-created surround sound exactly follows the basic physical laws of natural room acoustics so that the active electro-acoustic room design is not perceptible as such. As if by magic, room acoustics starts to play a supporting role in an event rather than being a limiting factor.

True-to-life sound reinforcement

There might be situations when it becomes necessary to enhance stage activities by electro-acoustic amplification. Again, Vivace is the method of choice to create an immediate and natural sound impression for the audience. This comprises absolutely true directional effects as well as the design of embedding additional room reflections. All of a sudden, the so-resulting sound is transparent, relaxed and natural. Vivace implements methods used in room acoustic and psycho-acoustic research and the respective findings that enable an optimised level of speech intelligibility even in reverberant surroundings. The enormous creative leeway for music has been previously undreamt of in the world of acoustics.

3D sound impressions

For a truly three-dimensional ambient sound impression it takes not only a horizontal movement plane for sound sources but also the acoustic dimensioning of a complete hemisphere around the audience and the genuine reproduction of distances. Vivace offers easy and flexible handling, control and automation. Unique acoustic atmospheres that fascinate the audience can be created by moving sound objects and by integrating them into natural sound situations or deliberately exaggerated sound arrangements.



Felsenreitschule, Salzburg

Generation of 3D sound

- Complementation of the elemental room acoustics by adding additional tonal components from numerous loudspeakers arranged around the audience
- Use of patented algorithms for creating natural sound fields based on measured impulse responses from acoustically outstanding halls
- Use of few high-class studio microphones at optimum recording positions for gaining precise and acoustically substantive input signals (additional microphones in the auditorium, if necessary)
- Parallel generation of up to four independent 3D sounds for the individual design of different areas or stage positions inside the hall or for a soft cross-fading between different room situations

Sound reinforcement system and effects

- Free movement of sound objects in the room controlling direction, size and distance
- Embedding of the objects into site-specific sounds
- Reproduction of any multi-channel format
- Optimum directional effect for the respective feasible loudspeaker layout
- Better speech intelligibility in reverberant settings
- Sound reinforcement with natural sound perception

Operation

- Touchscreen for the setting of fixed pre-sets, custom-made in the adjustment process for individual hall configurations or orchestra sizes
- Remote software:
  - detailed adaptations of the pre-sets for skilled Tonmeisters and sound design engineers
  - controlling and automation of source movements and 3D sound effects
- Possible remote control settings (pre-set modes and automation control):
  mixing desks (MIDI, MMC)
  sound feeds (MIDI-timecode, MMC)
  media control systems (ethernet, MIDI)
  tracking systems
  source positioning and programming via touchscreen and special 3D pointing devices

Fine-tuning

- In the initial fine-tuning, technically precise frequency responses, levels and delays are set.
- For fine adjustment, the resulting 3D sound is designed in cooperation with the artistic directors during rehearsals and concerts. It is adapted to match the desires and ideas of the customer.
- In the course of subsequent rehearsals and concerts, further fine adjustments and optimisations can be made for particular orchestra instrumentations or special kinds of events.

Passionsspiele Oberammergau

References

Like a good concert hall, Vivace is an essential basis for providing top artists adequate opportunities for creative and artistic expression. For this purpose, Vivace is already in use in numerous permanent and temporary installations all over the world. Famous conductors, soloists and orchestras have been fascinated by the achieved sound quality.

Orchestras

- Bayreuth Festival Orchestra
- BBC Concert Orchestra
- Berlin Philharmonic
- Royal Concertgebouw Orchestra
- Chamber Orchestra Vienna-Berlin
- Mahler Chamber Orchestra
- Mariinsky Theatre Brass Ensemble
- Munich Philharmonic
- New York Philharmonic
- Bavarian State Orchestra
- Orchestra del Teatro La Fenice
- Orchestre Philharmonique de Radio France
- London Philharmonic Orchestra
- Staatskapelle Dresden
- SWR Symphony Orchestra
- Bavarian Radio Symphony Orchestra
- Vienna Philharmonic

Conductors

- Daniel Barenboim
- Sylvain Cambreling
- Riccardo Chailly
- Daniele Gatti
- Valery Gergiev
- Thomas Hengelbrock
- Mariss Jansons
- Lorin Maazel
- Zubin Mehta
- Riccardo Muti
- Sir Simon Rattle
- Jukka-Pekka Saraste
- Christian Thielemann

Soloists

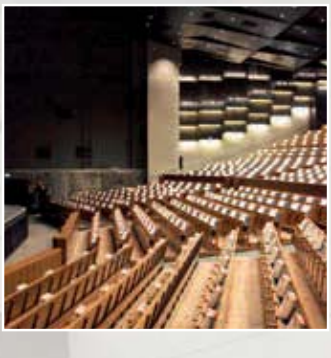
- Cecilia Bartoli (mezzosoprano)
- Yuri Bashmet (viola)
- Christoph Eschenbach (piano)
- Sol Gabetta (cello)
- Thomas Hampson (baritone)
- Angelika Kirchschlager (mezzosoprano)
- Lang Lang (piano)
- Mischa Maisky (cello)
- Anne-Sophie Mutter (violin)
- Pepe Romero (guitar)
- Daniel Müller-Schott (cello)
- Julian Rachlin (violin)
- Arcadi Volodos (piano)

Klassik am Odeonsplatz, München

Hardware

- Fully redundant system
- Technical data:
  19“ installation format (6 RU)
  dimensions h 266 mm x w 432 mm x d 500 mm
  up to 192 output channels at 48 kHz via MADI or Dante
- No compulsory coupling to external hardware components

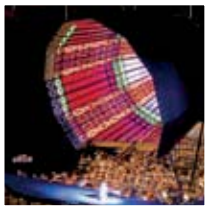
The requirements on the necessary additional components such as microphones, converters, amplifiers and loudspeakers are dependent on the specific use in the respective project. The use of selected high-quality components is mandatory for creating a true-to-nature sound – still it is not necessary to confine oneself to working with a limited number of manufacturers.



Typical areas of use

- Acoustic optimisation of concert halls
- Enhanced variability and usability for multi-purpose halls and town halls
- Tonal flexibility for opera houses
- Concert hall sound for open-air events with classical music
- Temporary venues for classical music
- Better speech intelligibility in straight theatre performances
- 3D sound for theatres, events, booths
- High-class directional sound reinforcement
- Production tools for new cinema sound formats
- Design of acoustically particular situations in churches, stadiums, theme parks, museums and test laboratories

Dalian International Conference Center, China



About us

One of the world's biggest engineering companies, Müller-BBM has been active in all fields of room acoustic planning for more than 50 years – successfully, indeed, as Müller-BBM experts are responsible for the design of numerous acoustically outstanding concert halls and operas throughout the world. The combination of this know-how with the expertise of our electro-acoustic engineers and our research department has facilitated the development of the electronic room enhancement system Vivace. Since 2008, it is setting standards in terms of quality, functionality and innovation.

Headquarters
Müller-BBM Acoustic Solutions GmbH
Robert-Koch-Straße 11
82152 Planegg/Munich, Germany
Phone + 49 89 85602-0
Fax + 49 89 85602-111

MÜLLER-BBM GRUPPE