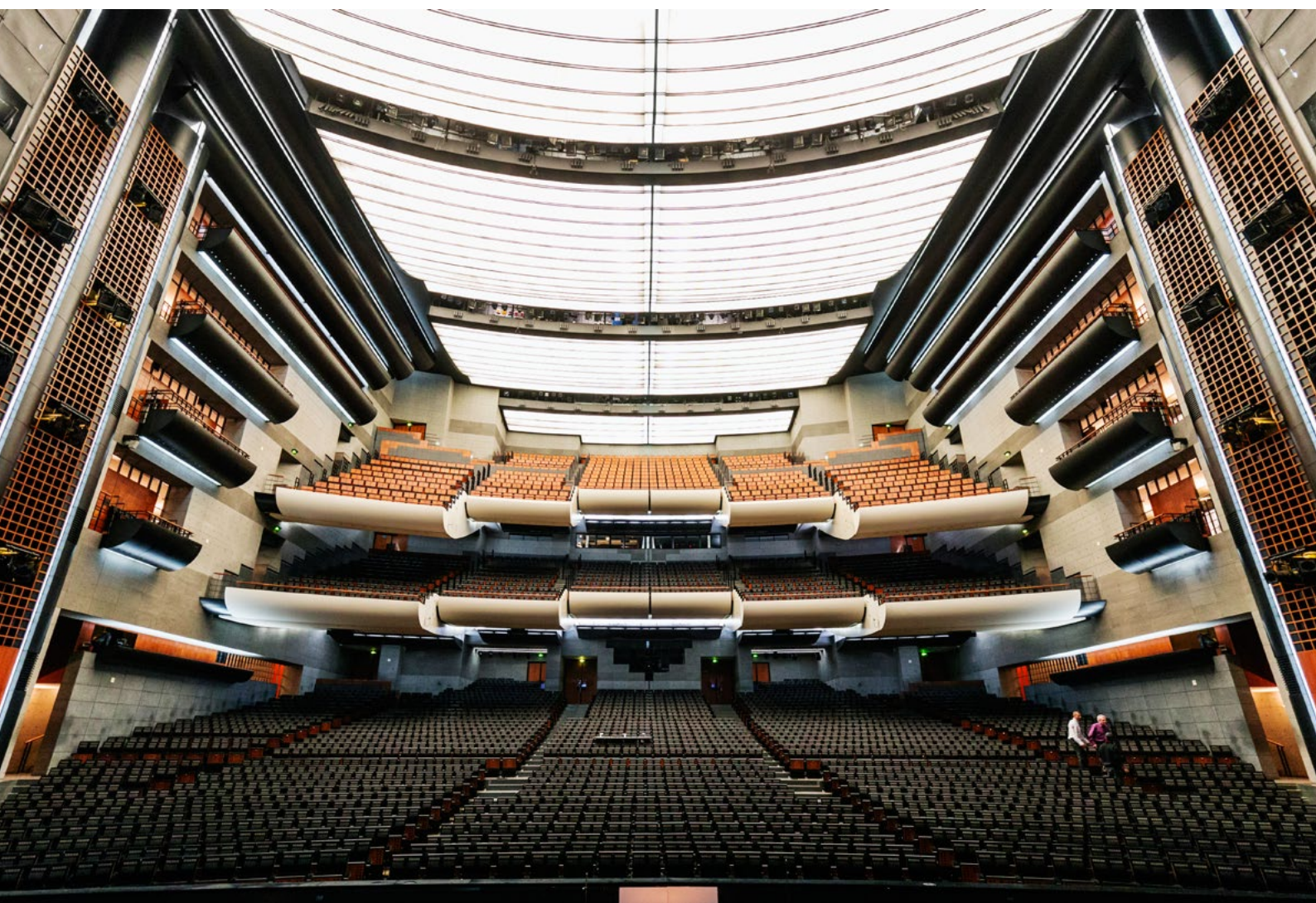


# STARS THAT DON'T STEAL THE SHOW

FOCUS MODULAR SYSTEMS FROM FOHNN® –  
SUITABLE FOR THEATRES AND CONCERT HALLS.



## ALL THE WORLD'S A STAGE

Opera or open-air, playhouse or outdoor theatre – our world stages differ from one another, to a greater or lesser extent, depending on the venue and the production. However, they all have one thing in common: Regardless of whether there's an impressive backdrop or a minimalistic stage set, every venue always needs a sound system that can effectively deliver what the audience is ultimately there for – speech and music.

That being said, excellent speech intelligibility and first-class sound quality are just two of the many requirements expected from a leading edge, professional audio system. The system should also be easy to install and integrate, using as few intrusive supporting speakers as possible. In fact, why not make them completely invisible? What's more, there should be even sound coverage for every seat – from the front row to the uppermost tier. Centrally from the direction of the stage, ideally ...

With **FOCUS MODULAR**, **FOHNN**<sup>®</sup> offers a range of modular line array systems with integrated **BEAM STEERING** that will meet all these requirements – with spectacular results.

**FOCUS MODULAR** comprises a series of high performance, DSP-controlled high frequency and low-mid modules, which can be combined with one another and adapted to suit the respective size and acoustic conditions of the venue. As part of a stand-alone control network including other **FOHNN**<sup>®</sup> devices (such as subwoofers or nearfield loudspeakers and digital amplifiers), the modules can all be controlled via a single piece of software – **FOHNN AUDIO SOFT**. This enables both their beam width and vertical inclination angle to be adjusted in real time, according to the acoustic conditions of the room. **FOCUS MODULAR** systems are therefore ideally suited to any theatre – whether for a fixed installation, or for mobile applications.

Find out more about **FOCUS MODULAR** and **FOHNN BEAM STEERING TECHNOLOGY** on our website:  
[www.fohnn.com](http://www.fohnn.com)



## CLEAR THE STAGE – FOR SOME SUCCESSFUL PROJECTS USING FOCUS MODULAR!





Opéra Bastille: from the back rows to the back of the stage

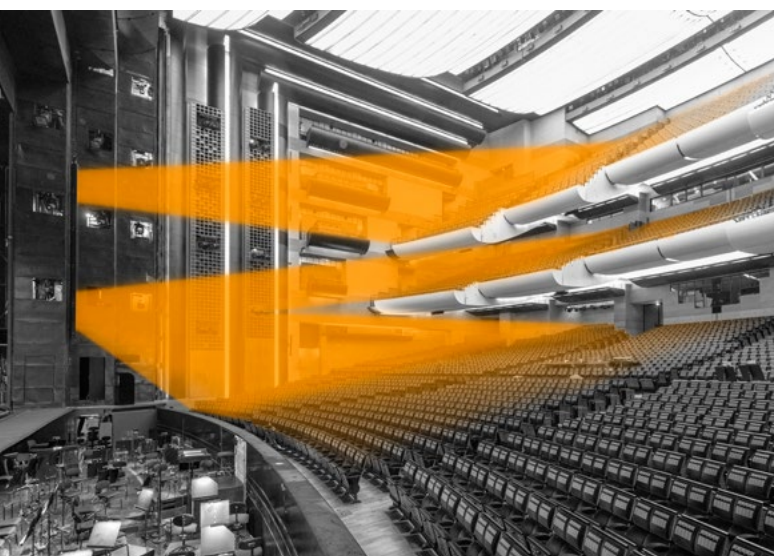
## A RATHER DIFFERENT BALCONY SCENE

### OPÉRA BASTILLE, PARIS (FIXED INSTALLATION)

**CHALLENGE:** The main auditorium of the French national opera house has a series of tiered, sloping balconies that cover the audience seating directly below. Supporting speakers under these balconies are considered to be visually distracting and therefore out of the question. At the same time, the main loudspeaker system needs to have a long reach and the ability to deliver even coverage – as well as excellent sound quality.

**SOLUTION:** A slender 7.48 metre x 22 cm column, consisting of five **FOCUS MODULAR** units, is installed on each side of the stage. The middle section of each column comprises three linked low-mid (**FM-400**) modules. Above and below each group is a high frequency (**FM-110**) module. The sound beams from each module are adjusted so that they reach the very back rows under the large balconies. Use of **TWO BEAM TECHNOLOGY**, which enables the generation of two separate beams, avoids any unwanted reflections from the balustrades.

Opéra Bastille: graphic representation of beams from the **FOCUS MODULAR** array



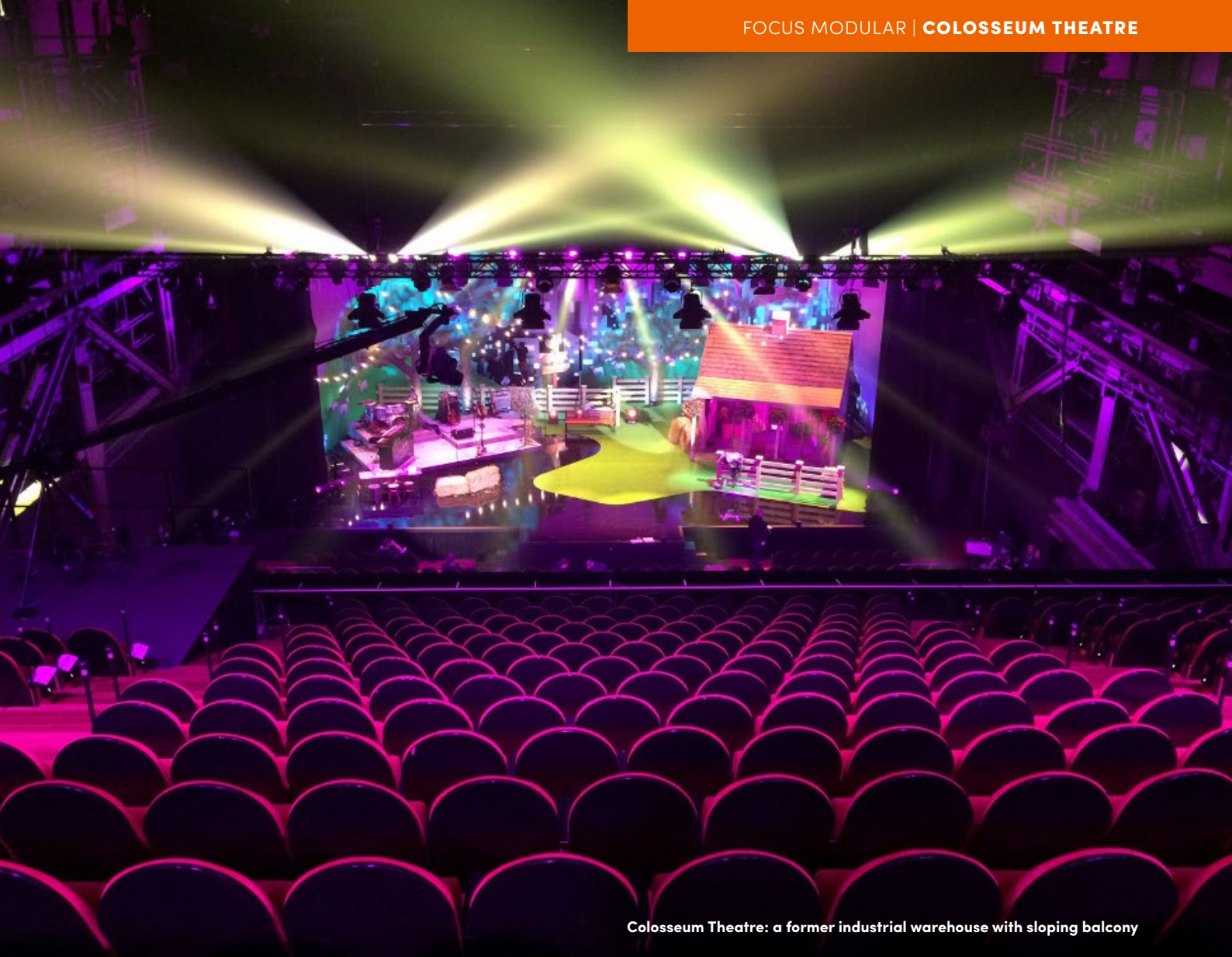
#### Additional advantages:

- perfect Integration into stage surroundings
- high feedback stability for microphones

#### Other Fohhn systems used:

- **LINEA-SERIES LX-150** and **LX-100**  
line source systems for the middle side balconies
- **D-SERIES D-4.1200** digital amplifiers
- **AIREA LX-10 ASX**  
nearfield loudspeakers for the highest/lowest side balconies
- **AIREA AM-20** Master module
- **PERFORM-SERIES PS-9** active subwoofers





Colosseum Theatre: a former industrial warehouse with sloping balcony

## FRONT ROW SOUND FOR EVERYONE

COLOSSEUM THEATRE, ESSEN (MIRJA-BOES' "DAS LEBEN IST KEIN PONYSCHLECKEN", TV RECORDING)

**CHALLENGE:** This large theatre has around 1000 tiered seats that rise to the back of the auditorium. A main sound system is expected to achieve balanced sound results for each of these seats. However, due to space limitations and architectural factors, the use of conventional curved arrays is out of the question.

**SOLUTION:** A virtually invisible **FOCUS MODULAR** array is installed on each side of the stage. Each array includes two **FMI-400** low-mid modules combined with two high frequency modules: an **FMI-100** and an **FMI-110**. An additional cluster, comprising an **FMI-400** and an **FMI-110**, is centrally flown above the edge of the stage. The inclination angle and width of each module's sound beam can be electronically controlled, via software, in precise 0.1° increments. This enables exact alignment of the loudspeaker beams so that unwanted reflections can be avoided, positively affecting both the levels of speech intelligibility and quality of sound.

### Additional advantages:

- perfect integration into stage surroundings
- high feedback stability for microphones
- highly accurate reproduction of speech and music

### Other Fohhn systems used:

- **LINEA-SERIES LX-11** nearfield loudspeakers at the edge of the stage
- **X-SERIES XM-4** monitor systems
- **X-SERIES XT-10** infill loudspeakers
- **PERFORM-SERIES PS-9** active subwoofers





Ruhr Festival Theatre: a view of one of Germany's largest stages

## GRAND PERFORMANCE ON AN EVEN GRANDER STAGE

### RUHR FESTIVAL THEATRE, RECKLINGHAUSEN (FIXED INSTALLATION)

**CHALLENGE:** This large theatre has around 1000 tiered seats that rise to the back of the auditorium. A main sound system is expected to achieve balanced sound results for each of these seats. However, due to space limitations and architectural factors, the use of conventional curved arrays is out of the question.

**SOLUTION:** A virtually invisible **FOCUS MODULAR** array is installed on each side of the stage. Each array includes two **FMI-400** low-mid modules combined with two high frequency modules: an **FMI-100** and an **FMI-110**. An additional cluster, comprising an **FMI-400** and an **FMI-110**, is centrally flown above the edge of the stage. The inclination angle and width of each module's sound beam can be electronically controlled, via software, in precise  $0.1^\circ$  increments. This enables exact alignment of the loudspeaker beams so that unwanted reflections can be avoided, positively affecting both the levels of speech intelligibility and quality of sound.

Ruhr Festival Theatre: over 1000 seats in the auditorium

#### Additional advantages:

- high feedback stability for microphones
- highly accurate reproduction of speech and music
- high performance and long reach

#### Other Fohhn systems used:

- **LINEA-SERIES LX-11**  
nearfield speakers on the edge of the stage and under the balcony
- **LINEA-SERIES AL-100** line source speakers for effects playback
- **X-SERIES XM-4** monitor systems







World Theatre Einsiedeln: spectator stands on the monastery forecourt

## DRESSED UP FOR THE OCCASION

WORLD THEATRE, EINSIEDELN ABBEY (PEDRO CALDERÓN'S "THE GREAT WORLD THEATRE", OPEN-AIR PRODUCTION)

**CHALLENGE:** The impressive entrance to this historic abbey forms an important part of the scenery, so a conspicuous, modern loudspeaker system will definitely not suit this stage setting. Sound coverage is also needed for the large sloping spectator stands, which are located at some distance from the abbey door.

**SOLUTION:** A slim **FOCUS MODULAR** column is used, among other things, for the main sound system: To the right of the door, two **FM-400** low-mid modules are combined with an **FM-110** high frequency module. The three units are covered with a sound permeable fabric, in a design matching the abbey brickwork, so that they are completely invisible to audiences. To the left and right of the monastery forecourt steps, two additional columns are mounted on special scaffold constructions. All modules can cover a distance of 90 metres.



World Theatre Einsiedeln: **FOCUS MODULAR** – in disguise near the abbey door

### Additional advantages:

- high feedback stability for microphones
- highly accurate reproduction of speech and music
- even sound coverage

### Other Fohhn systems used:

- **LINEA-SERIES LX-601**  
high performance line source systems for extended coverage
- **LINEA-SERIES LX-150** line source speakers as monitor systems
- **X-SERIES XT-10**  
full range loudspeakers as localized speakers for the public
- **X-SERIES XT-33** full range loudspeakers as rear speakers
- **D-SERIES D-4.1200** and **D-2.1500** digital amplifiers
- **EASYPART FP-MEDIA** as control speaker for the Director
- **PERFORM-SERIES PS-9** active subwoofers





Open-air theatre Am Roten Tor: avoiding unwanted reflections

## NO ENCORES FOR THE NEIGHBOURS

AM ROTEN TOR OPEN-AIR THEATRE, AUGSBURG  
("BLUES BROTHERS", OPEN-AIR MUSIC THEATRE)

**CHALLENGE:** Houses and sections of city wall surround this open-air theatre. These throw unwanted reflections onto the stage, disturbing actors during performances. Previous use of point source systems has produced a more scattered sound image, leading to greater noise levels in the immediate vicinity of the venue.

**SOLUTION:** A **FOCUS MODULAR** array is installed on each side of the stage area for the duration of the production. Each array includes two **FM-400** low-mid modules and an **FM-110** high frequency module. These can all be adjusted in real time, providing absolutely even, targeted coverage of the audience area, while also reducing the amount of noise heard outside the theatre. The entire spectator stand is covered using two split beams – a tight thin one for the back rows and a broader one for the front rows.

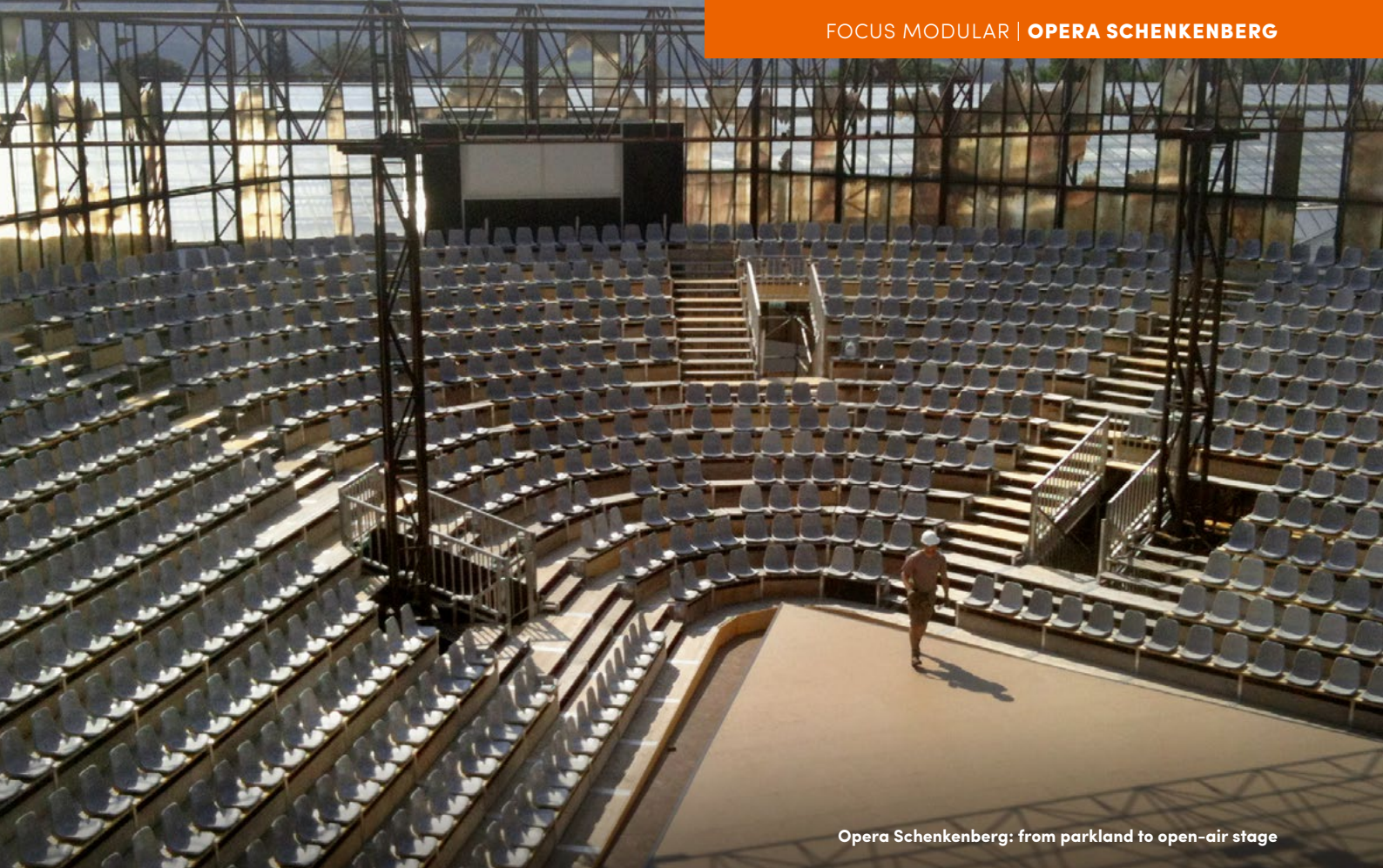
### Additional advantages:

- high feedback stability for microphones
- highly accurate reproduction of speech and music

### Other Fohhn systems used:

- **LINEA-SERIES LX-150**  
line source systems for effects playback and surround sound
- **PERFORM-SERIES PS-9** active subwoofers





Opera Schenkenberg: from parkland to open-air stage

## THE SCENERY SINGS TOO

OPERA SCHENKENBERG, SCHINZNACH-DORF (GIUSEPPE VERDI'S "IL TROVATORE", OPEN-AIR PRODUCTION)

**CHALLENGE:** A large and impressive stage set, representing a disused factory, is erected on a car park especially for this production. Bulky looking sound systems – such as conventional line arrays – will potentially spoil the artistic effect of the scenery. Therefore, loudspeakers are required that can effectively blend into the set, while delivering outstanding sound quality.

### Additional advantages:

- high feedback stability for microphones
- high performance and long reach
- even sound coverage

**SOLUTION:** Two **FM-400** low-mid modules, each combined with an **FM-110** high frequency module, are mounted on steel girders. These compact, visually unobtrusive **FOCUS MODULAR** systems are fitted with special rain covers to protect against the effects of any bad weather during the month-long performance run. Acoustic material, with the same colouring as the steel construction, is also used to make the loudspeakers appear "invisible". **FOHNN BEAM STEERING TECHNOLOGY** ensures precise coverage and the highest levels of speech intelligibility.

Opera Schenkenberg: the gigantic stage construction







For more information on our **FOHNN-SERIES** and sound systems for theatres and concert halls, please visit our website or contact our planning engineers directly:

## **FOHNN® AUDIO AG**

Hohes Gestade 3-8  
72622 Nürtingen  
Germany

Tel. +49 7022 93323-0  
Fax +49 7022 93324-0

[www.fohnn.com](http://www.fohnn.com)  
[info@fohnn.com](mailto:info@fohnn.com)

**FOHNN®** on Social Web

