



# SYSTEMS AND SOLUTIONS

for sports facilities and multi-purpose halls



Everybody wins:  
best **Sound** and  
better **Safety** in one  
integrated system.

# SOUND FOR SPORTS FACILITIES

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## With integrated voice alarm and sound systems from TOA, everyone's a winner.

At any event, large or small, safety is paramount. By installing a voice alarm system, you're ensuring the protection and security of human lives. At the same time, the key to a successful event – be it sports or entertainment – is communication with your audience. Only when you reach out and connect with your visitors can you inspire them. Voice announcements and music drive the emotional context of an event and bring the audience into the action.

TOA delivers both components in an integrated system: combining everyday use of the sound system with the optimal equipment needed for emergencies.

The TOA sound system allows you to reach auditoriums and grandstands with announcements, deliver convincing sound for video recordings or advertising, and ensure safety by providing the right information at the right time. Together we will find the optimal sound solution for your location. Naturally, we are comprehensively certified and comply with all applicable guidelines, whether from the (German) DFB or other international bodies.

With a TOA system you can achieve the right volume for any number of visitors with the best possible speech intelligibility. Our references in the field of sports and leisure facilities speak for themselves – please peruse online at [www.toa.eu](http://www.toa.eu) or contact us.



### Why voice alarms?

The regulations that apply to an alarm system vary greatly from region to region in Europe. There are usually regulations for sales areas or meeting rooms of a certain size, including sports facilities, depending on the number of spectators.

A voice alarm system is part of a general alarm system and is partially controlled automatically by the fire alarm system. The integration of voice alarming increases the overall effectiveness of your system. In concrete terms, this means that you protect human lives and ensure that rapid assistance can be provided in any emergency situation.

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# Technical equipment according to DIN VDE V 0827 – prepare for the future right now.

The know-how we've gleaned from many years of development and production of safety technology flows into our devices. With a TOA system you acquire technology that proves its value in every moment. With TOA, you can ensure that your systems meet the highest technical standards – and you can already plan and set up your system according to DIN DE V 0827 for emergency and hazardous systems.

The question of safety technology is not only important in a new building. Existing systems can also be retrofitted and expanded to achieve a better safety standard. TOA systems ensure that new applications can be successfully integrated at all times. And TOA systems are flexible. Whether you need to connect different devices or implement specific requirements, if an “off-the-shelf” application doesn't meet your requirements, we develop the perfect solution. This is done according to your specifications and in proven, trusted and reliable TOA quality.



## SOUND FOR SPORTS FACILITIES

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# Connect your sound set-up in an integrated system, with additional security for your

Whether hosting track and field athletics, football matches or live music entertainment, events in sports stadiums often require different sound systems. By using a system from TOA you are equipped for every event. And at the same time you have invested in the safety of your visitors. The combination of voice alarm and sound system from a single source is not only advantageous at the point of installation, it's also more effective to have only one contact person assisting with regular maintenance. And we can do even more: by acoustically simulating your project, we establish the best possible equipment for your location right from the planning phase. Ensuring that you're optimally equipped for every occasion.

## RECOMMENDED PRODUCTS

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### Music horn speaker CS-660BS-EB

These music horn speakers are comprised of a high-efficiency weather-resistant horn and a high quality sound cone speaker, providing excellent speech and BGM clarity. They feature ABS resin enclosure and stainless steel bracket for all weather durability. Both speakers are certified to the European Standard EN 54-24: 2008 and International Standard ISO 7240-24: 2010, and are compliant with the British Standard BS 5839-8: 2008.

- Highly intelligible 2-way system
- All weather durability with water and dust protection
- Impedance change available by tapping switch located inside the terminal cover

### Amplifier DA-550F

The DA-550F is a four channel amplifier ideal for fixed installations. The inputs can be connected via XLR or pluggable screw terminals. Special protection circuits and a separate power supply for each channel make it particularly fail-safe. In addition, the status of all channels can be controlled and monitored externally.

- Independent power supply for each channel
- Light weight and compact
- Rack mountable with 2 units
- Stack up to 5 units without open spaces between units
- Selectable stereo or bridge operation
- Low heat dissipation
- Comprehensive protection circuitry
- Removable dust filters for easy maintenance



# EXAMPLE COMPONENTS **SMALL STADIUM**

## Halls/Aisles/Locker rooms



### PC-2360

Ceiling speaker

- Flat front panel
- Quick and easy installation



### BS-1030B

Wall speaker

- 2-way bass reflex speaker
- Cost-effective high power PA box speaker
- Various installation options
- Splashproof construction in compliance with IPX4

## Control room



### DM-1200

Dynamic microphone

- DM-1200D comes with a remote control function to activate amplifiers power or chime unit and with a 5 m cable with 5-pin DIN plug



### M-164E-AE

Stereo mixer

- 16 channels (6 mono + 5 stereo) with a fader and a meter-bridge for level monitoring
- Variety of input / output connectors for many types of audio instruments
- Built-in effect functions for simple mixing

## Interior space



### WT-5800

Receiver

- Automatic frequency scan
- LDC screen



### WM-5325

Bodypack transmitter for lavalier microphones and headsets

- Excellent range
- Compact and ultra-lightweight
- Long battery durability



### YW-4500

Antenna for Wall/Ceiling Mounting

- Omnidirectional dipole antenna



### WM-5270

Handheld microphone

- Dynamic vocal microphone with a cardioid pickup pattern with excellent sound characteristics

## Stands



### CS-660BS-EB

EN54-certified music horn speaker

- Highly intelligible 2-way system
- All weather durability, water and dust protection
- Impedance change available



### HS-1500BT

Coaxial array speaker

- Well-controlled sound coverage: 90° horizontal x 40° vertical
- Easy to carry and easy to install, with handle for easy transportability
- Twin input terminal connections (Speakon® and screw terminals) for fixed and mobile installation
- Can be used as a floor monitor

## Engineering room



### M-9000M2

Digital mixer

- Up to 16 panels can be connected by using a RC-001T control module
- Easy to use software



### ZM-9014

Assignable remote button panel

- 4 assignable buttons with LED status indicator
- Assignable ID rotary adjustment on box



### DA-550F

Digital power amplifier

- Light weight and compact
- Forced-air cooling system
- Comprehensive protection circuitry
- Low heat dissipation

## Car park/Exterior grounds



### SC-615M

Horn speaker

- All weather durability
- Very rugged and durable construction ensures long term reliable operation
- Excellent speech clarity
- High SPL
- Wide frequency response
- Easy impedance selection

# SOLUTIONS FOR **BIG STADIUMS**

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## Stadium dynamics. Many people, long distances and greater safety.

As acoustic spaces, stadiums are fundamentally sophisticated. The acoustics change not only due to the background noise but with the number of visitors. Each stadium architecture is individually designed. As a result, the acoustic planning for each location must also be individually tailored. In these buildings there are no standardised concepts for sound solutions. In addition to the aforementioned circumstances, other points must be taken into account in the planning: the materials used in the outdoor area should be as weatherproof as possible. In addition to the grandstands, other areas have to be planned acoustically. And in the best case scenario, a stadium or sports facility in a residential area needs to avoid being a nuisance to residents.

We have all these things in mind when we work with you to develop the optimum technical solution for your project.



## RECOMMENDED **PRODUCTS**

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### **Voice alarm system VX-3000**

The VX-3000 series is a reliable and energy-efficient voice alarm system that combines multiple functions in one device. The division of the devices into a decentralised system also prevents exceptional cases from causing a total failure. The small number of necessary components saves space, simplifies project planning and reduces cabling costs. Thanks to the flexible system architecture, the VX-3000 can be scaled and expanded for any size.

- Compact: All functions, all inputs and outputs in one unit
- Cost effective: easy system configuration thanks to the small number of components
- Flexible: broadcast many different audio signals simultaneously
- Scalable: up to 1280 remote microphones
- Energy saving
- Decentralised: IP network based

### **Speaker HX-7**

The HX-7 is a compact line array loudspeaker with adjustable dispersion angle and SYNC-Drive™ waveguide technology for the tweeter. The extraordinary design of the HX-7 combines 4 modules, which can be adjusted vertically by 0 / 15 / 30 / 45 or even 60° and can therefore be perfectly adapted to local conditions and different acoustic requirements.

- Built-in isophasic wavefront control horn with compression driver ensures precise HF control
  - 0° mode facilitates the most effective line array set-up
  - Easily adjustable vertical dispersion angle
-

# EXAMPLE COMPONENTS BIG STADIUMS

## Car park/ Exterior grounds



### SC-630MEB

EN54-certified horn speaker

- All weather durability
- Unique oval shape
- Excellent speech clarity
- High SPL

## Admission control



### N-8050DS

Door station

- For indoor / outdoor use
- Status LED



### N-SP80MS1

SIP multimedia station

- Intuitive operation with 7-inch touch screen and dial keys



### N-SP80VS1

SIP video door station

- Robust and weatherproof
- Full-duplex communication



### N-8000EX

IP network intercom exchange

- 16 station capacity
- 4 internal, 8 external speech links

## Interior space



### S5.5-RX

True diversity receiver

- 1400 selectable frequencies
- LCD screen



### EM-800

Gooseneck microphone

- Excellent high-frequency response delivers clear output
- Optional microphone stand available (ST-800)



### YW-4500

Antenna for Wall/Ceiling Mounting

- Omnidirectional dipole antenna



### S5.5-HDX

Dynamic handheld microphone

- LCD screen
- Up to 10 hours of continuous operation with a single AA battery

## Fire brigade entrance



### RM-200SF

EN54-certified emergency remote microphone

- Emergency mode, start and stop automatic broadcasts of emergency announcements, reset emergency signals, and live microphone announcements
- CPU-switch for emergency broadcast to all zones even in case of a CPU error

## Stands



### HX-7

EN54-certified array speaker

- Variable dispersion speaker system
- Weather and kick proof
- Directivity angle of the speaker system can be adjusted

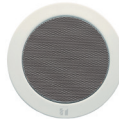


### Alpha 7530EN

EN54-certified high power speaker module

- High power Mid/Hi module (140dB peak) with horn loaded 10" MF and 3" HF components
- Frequency response 220Hz-19kHz  $\pm 3$ dB
- 75° x 30° dispersion

## Halls/Aisles/Locker rooms



### PC-2360EN

EN54-certified ceiling speaker

- Flat front panel
- Quick and easy installation



### BS-678BSB

EN54-certified box speaker

- Stylish, compact and unobtrusive
- Quick and easy wall-mount installation
- Cost-effective
- Universal use, suitable for BGM

## Control room



### RM-300X

EN54-certified remote microphone

- For both emergency and general purpose broadcast
- Zone selection or all call
- AUX Input for BGM distribution



### M-164E-AE

Stereo mixer

- 16 channels (6 mono + 5 stereo) with a fader and a meter-bridge for level monitoring

## Engineering room



### VX-3004F

EN54-certified system manager

- Up to 4 amps (1 zone – 1 amp, 4 AB-zones or 3 AB zones + standby amp)



### VX-3008F

EN54-certified system manager

- Up to 3 amps (8 zones switching between 2 amps + standby amp or 8 zones freely assignable to 1 of 2 amps)



### VX-3000DS

EN54-certified power supply

- Two built-in power source units with a high-performance charger
- Automatic switch to auxiliary battery power if the AC power supply is down

# SOLUTIONS FOR **INDOOR LOCATIONS**

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## Be prepared for every event by staying

As an event location, halls must be one thing above all else: flexible. They need to be equipped with variable interior fittings in order to provide the optimum setting for a vast variety of events. This means that the sound system must first and foremost be flexibly adaptable to the general conditions.

To ensure maximum safety, we need to think beyond simple fire protection and provide additional safety through voice alarms. And it's all the better if only one system, combining voice alarm and sound systems, needs to be installed. This makes handling easier for the user, and ensures support for the entire system by a single point of contact. And, best of all, quality and longevity are built into the very core of your TOA system.



## RECOMMENDED **PRODUCTS**

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### **Microphone WM-5270**

The WM-5270 is a dynamic vocal microphone with a cardioid characteristic. In addition to its excellent sound characteristics, its robust construction makes it perfect for the stage and fits well in the hand.

- On/off switch at the bottom of the microphone – no accidental activation
- Highly immune to handling noise and feedback
- Excellent sound characteristics

### **Speaker F-2000BTWP**

The demands placed on sound reinforcement systems are becoming increasingly complex and require flexible solutions. When loudspeakers are not just a match for the installation, but have to adapt to the environment, 2-way loudspeakers are the right choice. Not only do they offer good sound and stability in a compact package, they also offer high performance and versatile mounting options.

- 60W; 20 cm
  - 2-way speaker
  - Wide dispersion angle
  - Many mounting options
  - Optional operation also with subwoofer
-



# EXAMPLE MULTI PURPOSE HALLS

## Hall



### HX-5

EN54-certified array speaker

- High power handling
- Splashproof versions (HX-5B-WP / HX-5W-WP)
- Parallel connectors – dual speakon and screw terminal
- Ball impact proof



### F-2000BT

Design speakers

- Compact wide-dispersion speaker
- Easily mountable 80° x 80° horn adapter for increased dispersion control included
- 2-way speaker with high quality 20 cm woofer and balanced dome tweeter



### FB-150B

Subwoofer

- Compact subwoofer
- 30cm (12") woofer
- Extremely wide frequency range

## Fire brigade entrance



### RM-200SF

EN54-certified emergency remote microphone

- Emergency mode, start and stop automatic broadcasts of emergency announcements, reset emergency signals, and live microphone announcements
- CPU-switch for emergency broadcast to all zones even in case of a CPU error



### WT-D5800

Receiver

- Automatic frequency scan
- LCD screen



### WM-D5200

Handheld microphone

- Up to 8 hours operation with a single AA battery



### RM-300X

EN54-certified remote microphone

- For both emergency and general purpose broadcast
- Zone selection or all call
- AUX Input for BGM distribution



### D-2008SP

Digital mixer unit

- 32 preset memories for user convenience
- Intuitive GUI
- Mixing console optional

## Halls/Aisles



### PC-2360EN

EN54-certified ceiling speaker

- Flat front panel
- Easy installation



### BS-250AB

EN54-certified box speaker

- A/B wiring
- 2 separate 100V transformer and 2x 60W speaker
- Fire resistant according to UL-94-V0

## Engineering room



### DA-550F

Digital power amplifier

- Light-weight and compact
- Forced-air cooling system
- Comprehensive protection circuitry
- Low heat dissipation



### UP-MV-206

Wall mount pre-amplifier

- With microphone (XLR) and AUX (RCA pin) input
- Phantom voltage for microphone on PCB selectable
- Volume control for microphone and AUX separately



### VX-3004F

EN54-certified system manager

- Up to 4 amps (1 zone – 1 amp, 4 AB-zones or 3 AB zones + standby amp)



### VX-3016F

EN54-certified system manager

- up to 2 amps (16 switched zones + standby amp or 2 x 8 switched zones)



### VX-3000DS

EN54-certified power supply

- Combination of two built-in power source units with a high-performance charger
- Automatic switch to auxiliary battery power if the AC power supply is down

## Car park



### SC-615BS

EN54-certified horn speaker

- All weather durability
- Excellent speech clarity
- High SPL
- Wide frequency response

# EXAMPLE FOR AN INTEGRATED SOLUTION

- Intercom system
- Voice alarm
- ProSound system


### Interior space

- S5.5-RX**  
True diversity receiver
- EM-800**  
Gooseneck microphone
- YW-4500**  
Antenna for Wall/Ceiling mounting
- S5.5-HDX**  
Dynamic handheld microphone

### Control room

- M-164E-AE**  
Stereo mixer
- RM-300X**  
EN54-certified remote microphone

### Eng



### Admission control

- N-8050DS**  
Digital door station
- N-SP80MS1**  
SIP multimedia station
- N-SP80VS1**  
SIP Video door station
- N-8000EX**  
IP network intercom exchange

# FOR OUTDOOR SPORTS FACILITIES



## Stands

**HX-7**  
EN54-certified array  
speakers

## Halls/Aisles/Locker rooms



**PC-2360EN**  
EN54-certified ceiling speaker



**BS-678BSB**  
EN54-certified wall speaker

## Car park/Exterior grounds



**SC-630MEB**  
EN54-certified horn speaker

## Engineering room

**VX-3004F**  
EN54-certified system  
manager

**VX-3008F**  
EN54-certified system  
manager

**VX-3000DS**  
EN54-certified power  
supply

## Fire brigade entrance



**RM-300MF**  
EN54-certified emergency  
remote microphone

# Reliable communication with perfect speech intelligibility: practical in everyday life, well equipped for emergencies.

## Voice alarm systems

From simple sound reinforcement to highly complex object monitoring, our sound reinforcement and voice alarm systems are characterised by their versatility and reliability. In addition to outstanding audio quality, our systems help to make a safe environment for the public. In the event of danger, your ELA system ensures that visitors are addressed. This is optimised in two ways: on one hand, your alarm system reaches exactly the people you want to reach. And on the other, the announcements are adapted to any background noise and made suitably loud, whilst maintaining the best possible speech intelligibility. For example, in the event of a fire this allows you to clear affected zones and to direct people away from smoky, hazardous parts of the building. Regardless of whether all people in the house must be reached or only a certain group require the warning call, each zone is notified clearly and explicitly.

## Intercom systems

Our intercom systems offer a wide range of possible applications. We not only offer a broad product portfolio, but can also adapt the devices to your specific requirements. For example, an intercom system enhances the effectiveness of your voice alarm system even further: After an alarm has been triggered, precisely tailored measures can be taken – not only because the call receiver is available to assist the person seeking help directly, but also because announcements and instructions reach all required destinations without any problems. Whether via everyday use for secure internal communication or managing emergencies and dangers: your TOA Intercom system is the reliable partner at your side.



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## Speakers

Whether required for music, alarm, announcements, or you need positionally versatile ceiling, wall or horn loudspeakers or durable weatherproof, EN-certified or ball-proof speakers – we have a vast portfolio of loudspeakers offering the optimum solution for every requirement, whatever the location. TOA loudspeakers all have one thing in common – excellent sound!

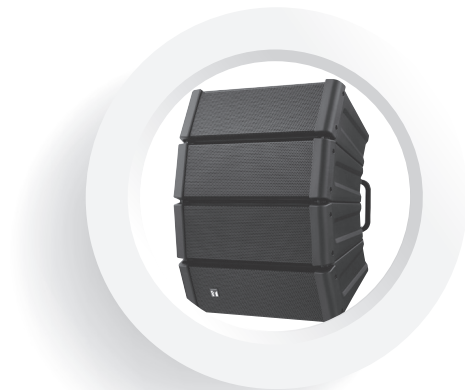
## PA/Sound systems

For many events music plays an essential role, and yet the requirements are always different. Your TOA sound system offers the best possible sound for all planned occasions and events, because our systems can not only transmit music, but also speech. And on a technical level our solutions certainly don't sound like a compromise, but are uncompromisingly good.



## Wireless line up

With our range of wireless microphones and radio transmission products, we cover the entire spectrum of possible applications. From presentations to concert sound reinforcement, from conference rooms to theatres: for your specific project we select the perfect equipment from all the possibilities. Whether lavalier or hand-held microphone, fixed installation or mobile racks, we've got every usage requirement covered. All optimised for speech, vocals or instruments.



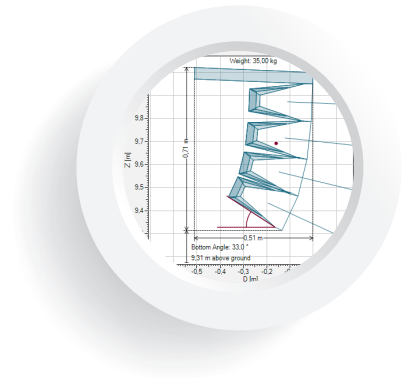
# We don't recommend things frivolously – we know what we're talking about.

Together, we will find the optimal sound solution for your sports and event location. Naturally, we take all applicable regulations into account, whether DFB guidelines or EU-wide legal regulations. We also supply you with equipment that has been comprehensively certified. That's why you

can be sure that with TOA you achieve the right volume for all acoustic zones, and the best speech intelligibility. At the same time, we offer many other advantages:

- The integration of a sound system into your existing fire protection system not only enables optimum technical coordination of the devices, but also a cost-efficient ProSound system with all the features you need.
  - Your advantage: merging the sound set-up into one system with no mix of manufacturers means that everything fits seamlessly.
  - Exceptionally quick and easy installation.
  - We offer you tailor-made solutions for your unique location and we ensure the best possible equipment for your rooms by rendering extensive simulations of the acoustic conditions. The perfect combination of sound system and voice alarm system ensures operational safety, and the satisfaction of having done everything possible for the safety of your visitors.
  - For example, by monitoring the entire signal path according to EN-50849
  - or with a network-based voice alarm center, with decentralised design for additional security.
- We work together with certified local partners. And whilst they know what the legislator's requirements are, they pride themselves on knowing how to provide even greater security.
  - Our systems are optimally equipped for emergencies with emergency power equipment; A/B cabling or ring cabling.
  - The quality of our products means that they're designed to last, and we back this up with the best customer service.
  - We are there for you beyond the installation of your system – offering continued support and service, both from our specialist workshop and from our trained partners.





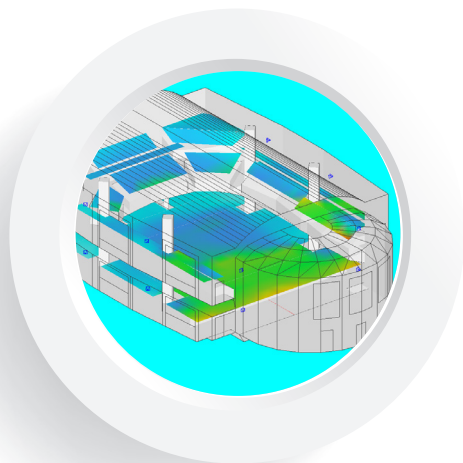
## What does TOA offer?

With TOA you have the choice between various fully EN 54-certified voice alarm systems, which are then optimised according to your project and required application. In any case, TOA speech alarm systems combine maximum security with uncomplicated emergency handling through fully automatic operation.

In cooperation with your specialist planner, we support you right from the planning phase with room acoustic simulations – even of difficult rooms – and focused on your specific user requirements. You can take us at our word.

## Our service for you includes:

- Provision of technical documentation (drawings, manuals, specifications etc.)
- Planning support
- Acoustic Simulation and Consulting
- Project-related product configuration
- Support during installation and commissioning
- Repairs and technical service



## Planning a sports facility? Please contact us

We support you in the planning and project management of your property and take care of your questions and concerns!

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We supply sound, not equipment.



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