



# Solutions for Educational Environments



***Fulfilling the requirement of schools, colleges and educational institutions for systems that enhance communication, security and public safety.***

# What is TOA?

There are not many comprehensive manufacturers of communications, public address and security systems in the market today. And there are very few that can claim a corporate history that extends back to 1934 when TOA was founded.



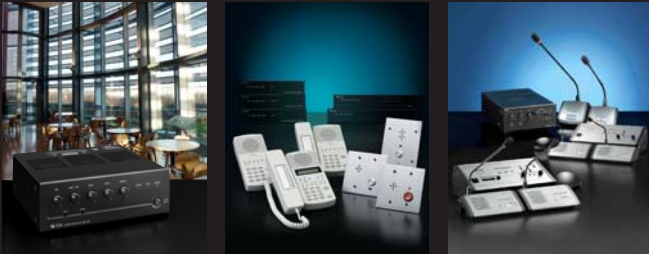
From its start in public address systems, TOA has steadily expanded its fields of expertise and achieved many technological advances along the way. Just as importantly, TOA has managed to maintain its comprehensive capability at every stage — from design to finished product. This has been key in gaining industry recognition for product reliability. TOA products mean reassurance and confidence for the customer and the proof of this are the installations we have performed around the world.



# TOA system categories

## Information & Communication

Making sure people receive essential information at the right time is what TOA systems do well. From basic to advanced, serving the needs of educational, institutional, commercial and public facilities of every size, our technology incorporates the latest IT and video developments to make sure our customers' requirements are fulfilled.



## Security & Safety

Security and safety are key issues today for virtually any environment, starting from the home. TOA is committed to making everyday life safer for all. Whether entry control systems to CCTV and networked security, disaster and emergency broadcast services, the reassurance that TOA provides is a significant factor in improving the quality of urban living.

## Professional Audio

From the power needed in stadiums to the accurate high-quality precision sound that opera houses also require, TOA optimizes audio reproduction in venues both large and small in terms of sound quality, power and dependability.



## Educational Environments

Today's educational environments are complex, having to fulfil requirements from the classroom to auditoriums, gyms and athletic facilities and entire campuses or even multi-location campuses. TOA systems are scalable, protecting the investment from becoming redundant and allowing configurations to precisely match each environment while providing the reassurance of compatibility with future system expansion options.

The next few pages show typical TOA systems for several environments.



# Classrooms

TOA strives to promote learning and increase classroom teaching efficiency through products designed to ensure optimum communication between the teacher and each student in a classroom. When wireless microphones, speakers and mixer amplifiers are utilized in classroom environments, teachers and students are able to communicate perfectly, reducing tension and stress while making the learning experience more enjoyable.



## Better communications, better learning

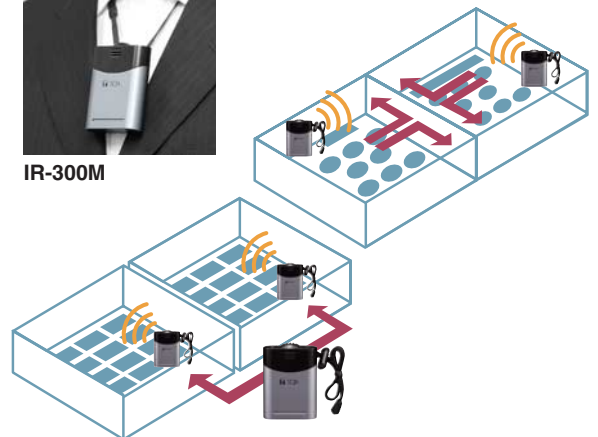
TOA wireless microphones allow teachers to speak at normal levels yet ensure that each student hears every word spoken for clear, non-distracting and uninterrupted classroom communications. The link between improved communication and more effective teaching along with reduced stress levels for both educators as well as students has been widely recognized and the installations of wireless microphones in classrooms have been subsidized by some governments.

## Infrared wireless microphone system

TOA infrared wireless microphone operation stays free from any interference from wireless microphones used in other classrooms for clear, non-distracting uninterrupted communication. Also featuring extended battery life for operation up to 8 hours as well as high sound quality for excellent intelligibility, infrared wireless microphones are available in handheld and lavalier types. A wide coverage range receiver is provided for stable voice transmission in various classroom sizes.



IR-300M



## UHF wireless microphone system

Using TOA's proprietary true diversity and space diversity technology, up to 16 microphones can be used in the same area free from interference problems. Microphones can also be used for 10 hours continuously on a single battery without recharging. Optimal for various instruction applications, the tuner allows up to 64 channels to be selected for use.



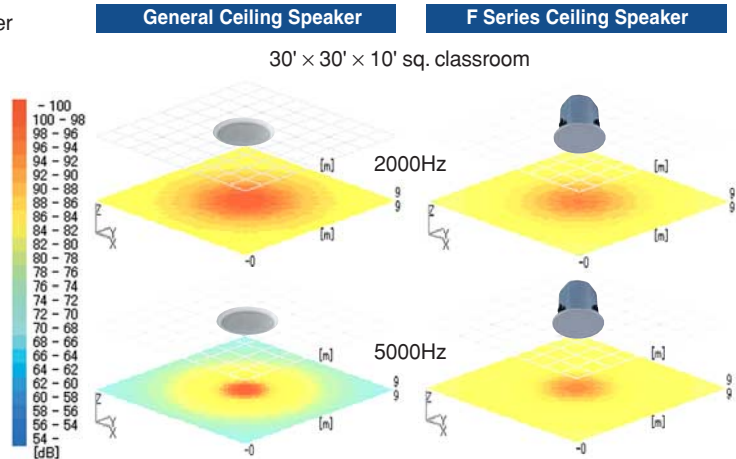
5000 Series

## Wide-dispersion Ceiling Speakers

Eliminating uneven sound dispersion, these speakers deliver high sound quality with wide area dispersion to make sure every student can hear perfectly no matter where they may be seated. This characteristic also reduces the number of speakers that need to be installed to cover a wide area. Sound delivery remains uniform over the entire area, maintaining the same sound levels regardless of listeners' seating positions for listening comfort and less stress with better comprehension. Speaker designs also blend in unobtrusively with any decor.



F Series Ceiling speaker



## Mixer Amplifiers

Compact, easy to install even in small classrooms and easy to operate by anyone, TOA's integrated mixer amplifiers are available with varying numbers of inputs to suit user requirements. Cost-effective systems can be created by selecting from various products to best suit the size of the classrooms and number of inputs desired. A security control knob prevents volume settings from being tampered with.



BG-200 Series  
BG-2000 Series

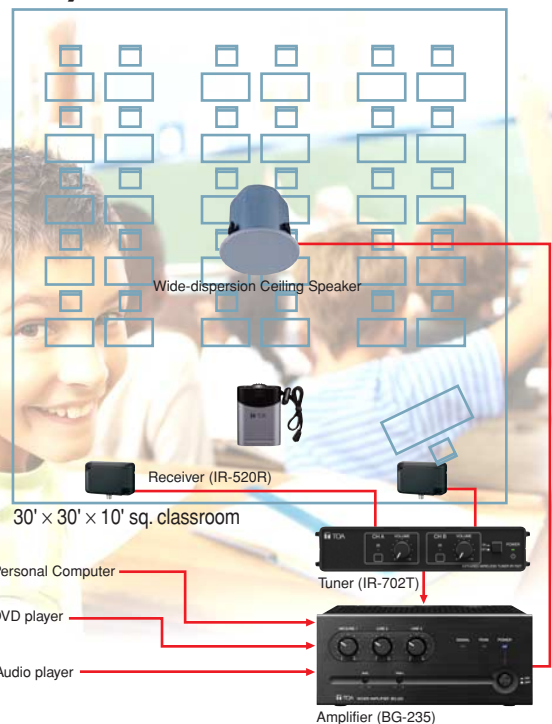
## Portable PA Systems



ER-1000

ER-1203

## System Solution of Classroom



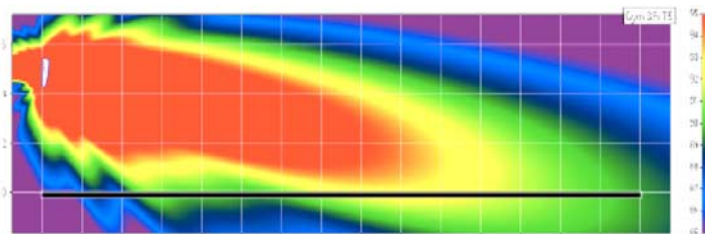
# Gyms/Multi-Purpose Halls

Choosing the right high quality sound reinforcement system or augmenting an existing system is a demanding and costly process. TOA products are designed to interface and enhance existing systems, adding functionality and upgrading performance, allowing customers to create no-compromise systems in easy cost-effective steps.



## Line Array Speaker Systems

This speaker configuration provides the maximum sound transmission over long distances and minimize echoes as well making them particularly suited for auditoriums along with their impact-resistant construction. As the speaker enclosures are crafted to resist impact, additional protective measures are not required. The speakers are designed for minimum volume attenuation over distance to allow the high quality sound to be evenly dispersed at natural-sounding levels and do not need special equalization.



The diagram represents a wall-mounted installation at a 5.5 meter height. Satisfactory sound pressure levels can be seen directly below the speaker as well from as 30m meters away for even dispersion and minimal attenuation at natural sounding levels.



*\*Protective cages not required*



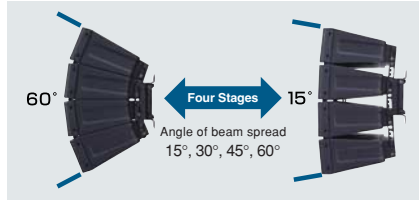
SR-T5





## Compact Line Array Speaker Systems

Optimized for installations in high-ceilinged venues, these speakers offer flexible installation options such as a ceiling cluster mount or a multi-speaker stand that can be moved around as needed. Featuring innovative adjustable sound dispersion angles, these speakers maximize the potential of line array effects. Multiple unit configurations provide greater low frequency output over the angle of dispersion.



HX-5B

## Digital Mixer

Ideal for use in acoustically challenging environments, TOA digital mixers incorporate an advanced measurement and processing algorithm to significantly improve speech intelligibility and sound quality. Other features include automatic suppression of feedback even if the presenter moves around with the microphone.



M-633D

The M-633D's Automatic Resonance Control (ARC) function brings a clear advantage to gymnasiums, swimming pools, and other sports facilities with strong reverberation. One-touch operation automatically measures the sound space and corrects the acoustic resonance phenomena, thus preventing any reduction in sound clarity and greatly improving speech intelligibility and music reproduction quality. All settings can be made on the front and rear panels. Once set, normal operation is easy: merely adjust the sound volume to match the application.

## UHF wireless microphones

Optimal for applications where distances range up to 393.7ft. (120 meters) from the tuner with 64 channels selectable for use. Ideal for use in halls, gyms and other locations. Handheld, lavalier or headset models available. Installation is easy.



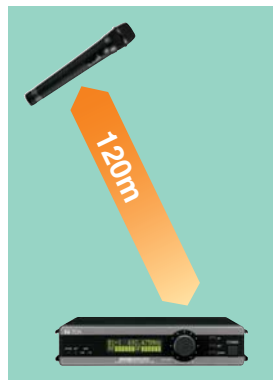
WT-5800



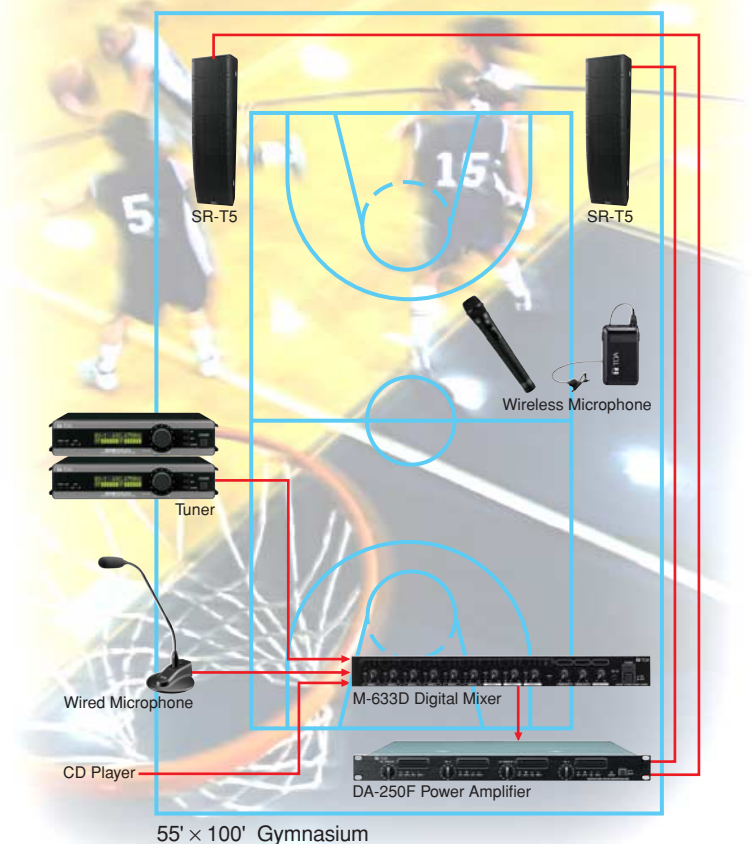
WM-5220



WM-5320



## System Solution of Gymnasium



55' x 100' Gymnasium

# Campus

Campuses come in all shapes and sizes. Some are divided into several locations. Whether located in urban areas or rural, they share many of the same requirements including campus-wide security and monitoring (from on and off campus locations), communications, broadcasting, and emergency notifications among others. TOA systems make extensive use of network connections for the limitless potential offered as well as for cost-effectiveness and high performance.



## IP Network Intercom Systems

TOA was quick to exploit all the advantages for communication using networks, building total expandability, reliability and cost-effectiveness into a new generation of intercom systems with added value for security applications as well. In addition, IP-based systems allowed control from any location and interfaced with preexisting systems. TOA IP systems offer educational institutions the solutions no other systems can.

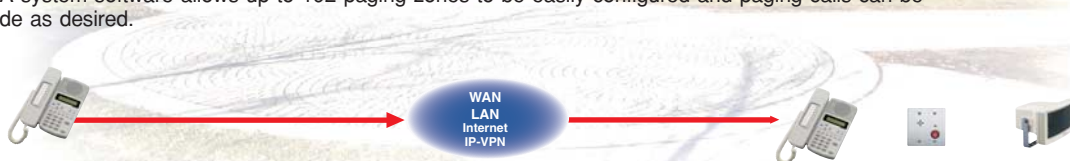
## Daily Communications

### Calling



### Paging Function

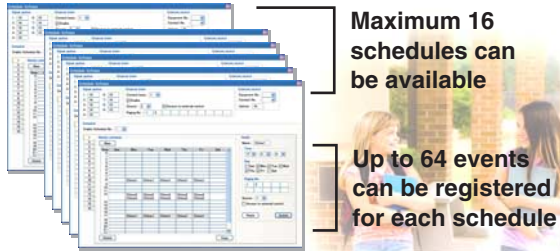
This important ability allows a master communication station as well as the rest of the system such as external equipment to initiate paging to public announcement equipment or the speakers of each station. TOA system software allows up to 192 paging zones to be easily configured and paging calls can be made as desired.





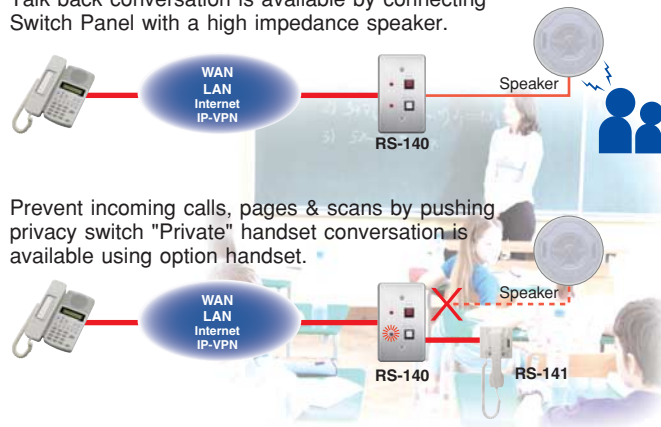
## Time Signal Function

Useful for time-based notifications and schedules, built-in chime tones or other audio signals from externally connected equipment can be broadcast to all stations and PA equipment according to a preset schedule.



## Talk back conversation and privacy Function

Talk back conversation is available by connecting Switch Panel with a high impedance speaker.



## Security & Safety

### Emergency All-Group Paging

In case of an emergency, all ongoing conversations, paging and other operations can be suspended to allow emergency all-group paging to all stations, PA equipment and outside telephone lines.



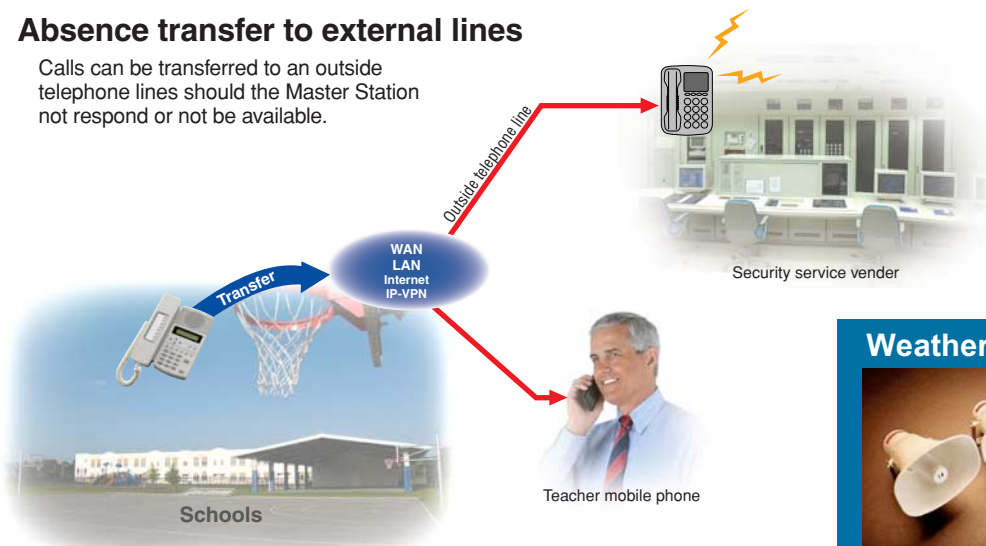
### Scan Monitor

Effectively enables off-site remote monitoring by allowing the master station as well as analog telephones to audio monitor two or more preprogrammed stations.



### Absence transfer to external lines

Calls can be transferred to an outside telephone lines should the Master Station not respond or not be available.



## Weatherproof Speakers



# What TOA believes in

**F**rom the beginning, TOA's founder strove to ensure that consistency and reliability would always be associated with the products that the company manufactured. Even with manufacturing facilities in many global locations, TOA products are distinguished by the fact that they are produced entirely in-house and not just assembled from various components and sub-assemblies provided by subcontractors just to reduce costs. This is the only way to ensure that our global customer base can order TOA systems that can be relied on to provide the same well known TOA performance level and reliability no matter where the installation may be.

We believe customers should be able to have the reassurance that TOA and its products will be around for many more years than its present 76. Knowing that TOA products today are the stepping stones to TOA systems of tomorrow and can be scaled exactly to a customer's changing requirements. TOA appreciates the fact that customers are making an investment in its technology and ensures that the technology can always interface with future system expansion without having to constantly revise the entire system. As products and technology developed to satisfy the new demands of global customers, system scalability and expansion potential become increasingly crucial.

TOA entered the North American market in 1972. Since the introduction of its first product it has gone on to steadily gain acclaim from the professional sector for its dedication and for extraordinary product lines that offer value and total reliability.





TOA is acclaimed for excellence in the specialized field of security and safety, information and communications and professional audio, all areas that demand uncompromising dependability as the safety and well-being of people are at stake.



# TOA products and systems serve in diverse applications around the world.



**Shawnee Heights High School, USA**  
Complementing even the most enthusiastic cheers, variable angle speakers can make themselves powerfully and clearly understood in the football stadium and in the gymnasium, thanks to their compact array design, broad horizontal coverage and precisely adjustable vertical dispersion angles.



**British Columbia Ferry Service Inc., Canada**  
For onboard paging and emergency announcements, BC Ferries installed a TOA system with over 440 speakers and paging horns. Ten zones can be accessed from one of four remote microphone stations, or with internal digital message/alarm bell repeaters.



**Gaylord Family Oklahoma Memorial Stadium, USA**  
ATOA intercom system is used for information transmission at this 80,000-seat football stadium. Stations link to an IP network through an exchange, for in-stadium calls and emergency announcements both indoors and outdoors, with volume adjusting automatically to crowd noise.



**Terrebbonne Indoor Soccer Stadium, Canada**  
This stadium employs a TOA Public Address and Paging System with multi-zone voice paging, plus background music and tone signaling. Compact array speakers clusters cover the soccer field, and wide-range speakers are used in the spectator areas.



**Université de Moncton, Track & Field Stadium, Canada**  
The Université de Moncton's Track & Field Stadium is a facility with bleacher and building sound and paging delivered from a TOA digital front end, through TOA long-throw horns and variable angle speakers. Interior ceiling speakers ensure wide-dispersion sound.



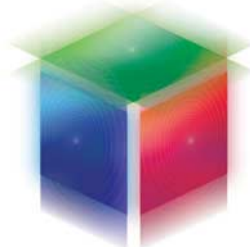
**Tsueng Kwan O Sports Ground, Hong Kong**  
The Fifth East Asia Field and Track Meet was held in 2009 in this 3,500-seat facility, where a TOA's audio management system and digital amplifiers continue their important role in both emergency and public announcement broadcasting.



**Mairie de Toulon, France**  
To facilitate meetings and council sessions, the Toulon Town Hall has installed a 70-unit TOA's conference system, together with modular digital matrix mixer and, for optimal room audio coverage, wide dispersion ceiling speakers.



**Porsche Arena, Germany**  
This multi-purpose hall with a capacity of 7,500 uses a TOA line array speaker system with acoustic simulation, to optimize placement and direction for clarity and acoustic pressure. An independent voice evacuation system public address system enhances audience safety.



**Human Society with  
Sound & Communication**

**TOA Corporation**

[www.toa.jp](http://www.toa.jp)

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