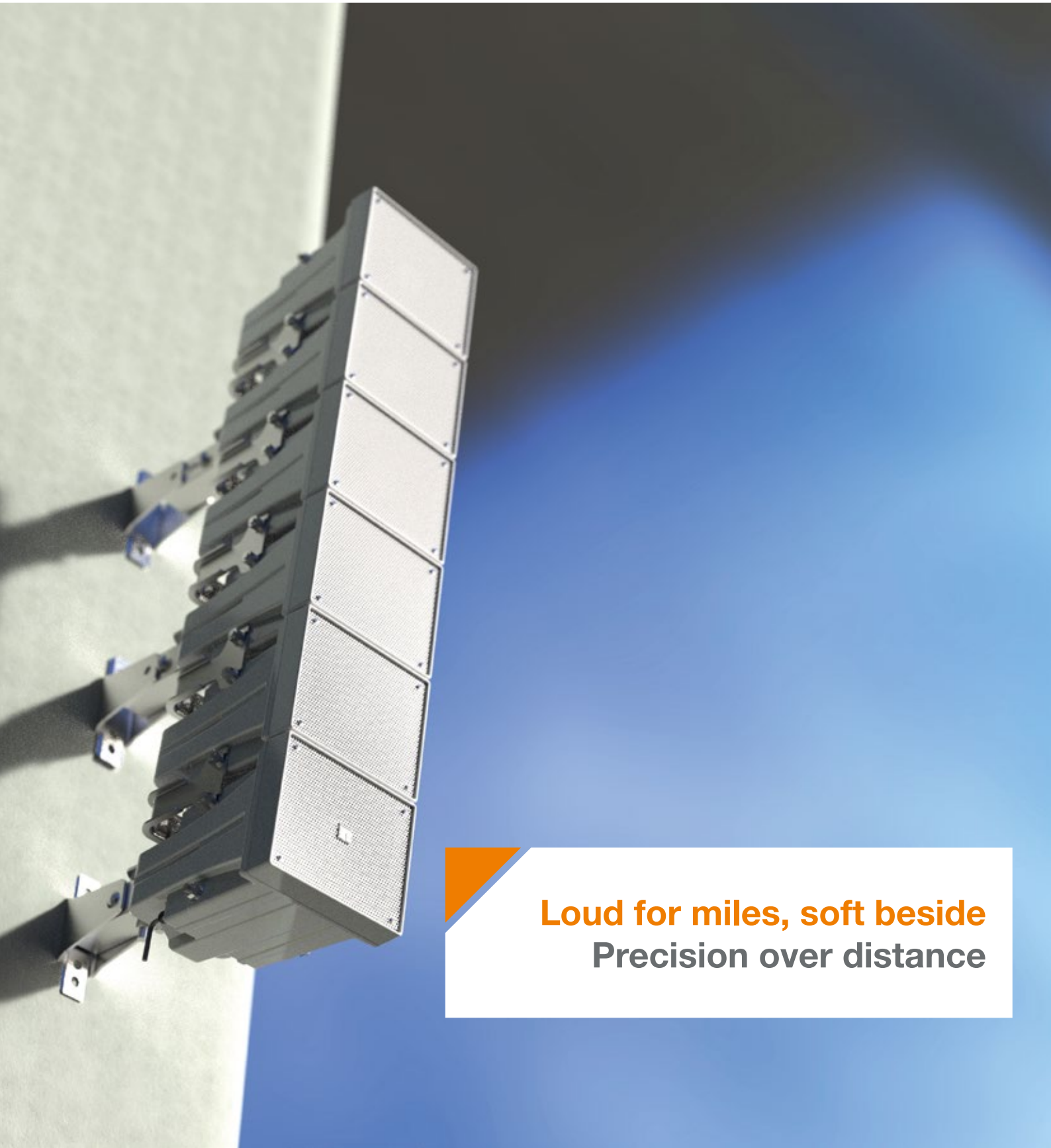
TOA

LONG RANGE HORN ARRAY SPEAKER

HA Series



Loud for miles, soft beside

Precision over distance

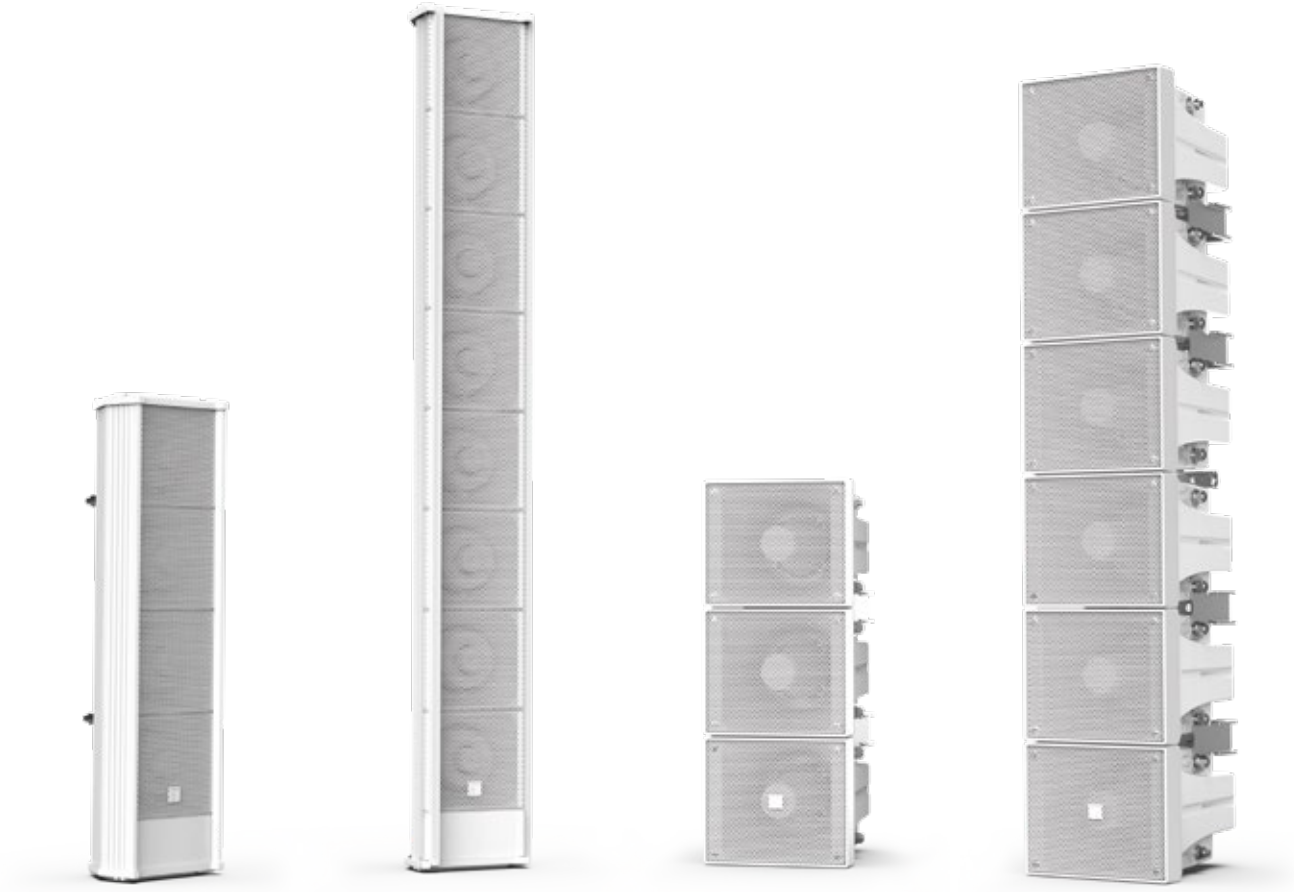
Long Range Horn Array Speakers

Experience exceptional sound precision with TOA's Long Range Horn Array Speaker series, engineered to deliver clear, intelligible audio over long distances while minimising vertical sound dispersion and reducing interference from nearby noise.

Designed specifically for outdoor mass notification, these speakers excel in providing reliable announcements, emergency broadcasts, and warning signals in critical situations, making them ideal for disaster management, public safety, and large-scale outdoor events.

Backed by TOA's decades of expertise in mass notification solutions, including our distinguished role as Japan's leading provider of disaster prevention speakers, this series builds on more than 15 years of pioneering development to ensure reliable performance in the most critical situations.

Available in four sizes, each speaker features a robust, weatherproof design with a saltwater-resistant coating. This ensures durability and reliability under various outdoor conditions, making them suitable for installations in coastal areas or harsh environments. The integrated high-pass filter protects the speaker elements, ensuring long-term, hassle-free operation.



HA-1030EN
30W

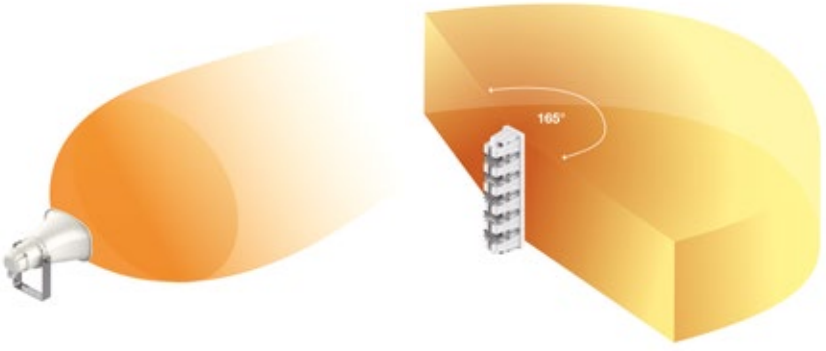
HA-1060EN
60W

HA-2120EN
120W

HA-2240EN
240W

Focused sound delivery

The innovative array configuration provides a wide horizontal dispersion angle up to 165°, 1 kHz horizontally and up to 25°, 1 kHz vertically. Thus, directing the sound to a precisely defined area. This design minimizes noise spillover, ensuring that messages are heard clearly without disturbing nearby areas, making it ideal for settings where noise control is essential.



Conventional Speaker **Horn Array Speaker**

Extended sound range

Thanks to its innovative design, this speaker series provides coverage far beyond conventional models. Practical tests conducted at an airfield near Hamburg, Germany, and in the desert near Dubai demonstrated the speakers' ability to transmit clear, intelligible messages over distances of more than 1 km.

Key Features

- Maximum SPL: 123, 128, 133, and 138 dB
- Wide horizontal dispersion angle reduces sensitivity to side wind effects
- Innovative horn array design **optimised for mass notification**
- **Easy installation** process

IP66 BS EN 54-24 EASE data

- **IP66 weather-resistant** and durable construction
- Saltwater-resistant paint finish
- Operating temperature range: -20°C to +55°C
- **EN 54-24** certified and compliant with **BS 5839-8:2008**

Disaster Prevention and Safety

As extreme weather events and environmental disasters become more frequent, effective disaster management is more critical than ever. In affected areas, early warnings and targeted evacuations depend on a reliable communication system capable of delivering clear and understandable messages to residents, even in challenging environments.

The Long Range Horn Array System is specifically engineered to deliver targeted, intelligible sound over long distances. By combining Line Array technology with TOA's advanced sound correction features, the system ensures unmatched intelligibility, making sure that messages remain clearly audible, even at considerable distances.

The system's minimal vertical sound dispersion also protects people in the immediate vicinity from excessive volume levels, ensuring that the sound is directed precisely where it's needed. Whether at border crossings, on beaches, or along highways, TOA speakers are a vital component for emergency communication. Their versatility allows easy integration into existing voice alarm systems, ensuring seamless communication in any disaster scenario.

All four models in the TOA Long Range Horn Array Speaker Series meet the EN 54-24 certification, ensuring they comply with the highest industry standards for reliable emergency broadcasts.

For over 15 years, TOA speakers have been integral to local emergency warning systems in Japan. This expertise has now been expanded globally, ensuring that TOA's cutting-edge technology helps save lives by guiding people to safety before disaster strikes.

Designed for Diverse Applications

Long Range Horn Array Speakers are also ideal for general broadcasts, making them suitable for numerous sectors:

In **industrial settings,** large areas can be covered with just a few speakers, enabling cost-effective communication in high-security zones.

Mosques can reach their congregation from afar without disturbing nearby residents with excessive noise.

In **(amusement) parks and ski resorts**, clear announcements can be made over long distances.

Further Application Areas:

- Airfields
- Cities with public address systems
- Harbours & Shipyards
- Military bases
- Parking lots
- Outdoor warning and informational broadcasting

HA-Series, Japanese Version

APPLICATION AREAS

Benefits

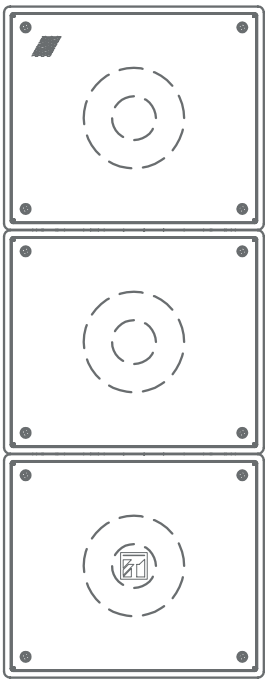
- **Reliable** communication in high-risk areas
- Clear and **intelligible sound** over **long distances**
- **Minimal sound disturbance** in the immediate vicinity
- Highest **safety standards** for peace of mind **(EN-54 certification)**

For Public Safety – Effortless Integration into Existing Emergency Systems

With a straightforward installation process and full compatibility to existing emergency infrastructure, the speakers can be quickly integrated into any mass notification or emergency alarm system offering 70/100 V speaker output. This reduces setup time and operational complexity in crisis situations.

PA/VA Systems VX-3000

VX-3000



HA-2120EN

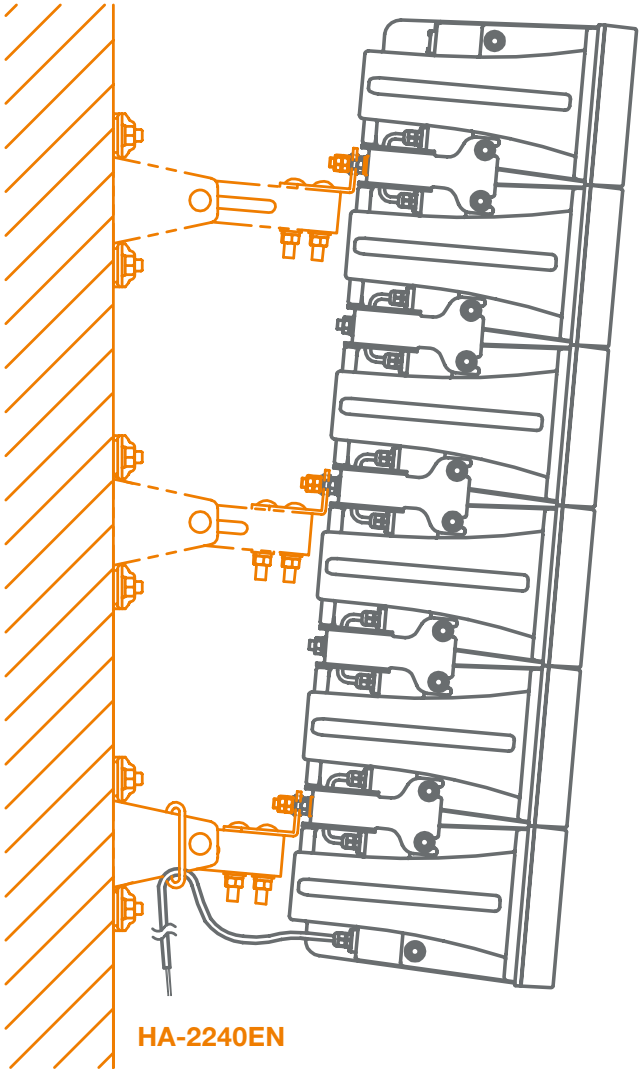
The Long Range Horn Array Speaker Series is compatible with the voice alarm system VX-3000. In combination this setup ensures clear communication in every critical situation.

Learn more about VX-3000:

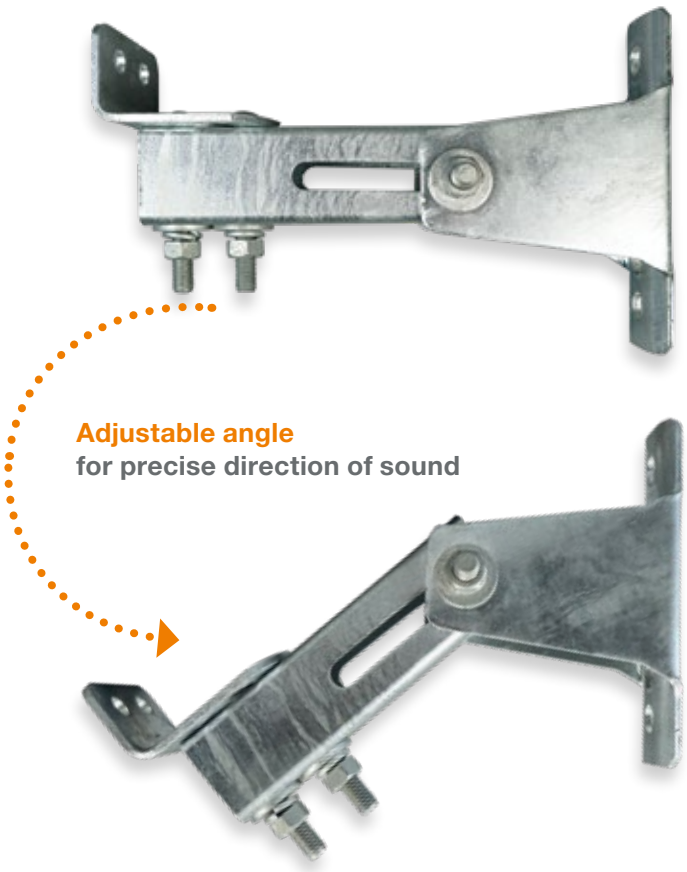
Engineered for Durability: Reliable Mounting for Long-Term Use

Heat waves and cold waves, heavy precipitation, tornadoes, and cyclones — harsh environments require robust installations!
The optional heavy-duty brackets HA-YS1100 withstand extreme conditions and allow precise alignment of the speakers in both horizontal and vertical directions (Horizontal: -45° to +45°, Vertical: 0° to -5° for HA-2240 and HA-1060, -13° for HA-1030, -21° for HA-2240).

Made from hot-dip zinc-aluminium alloy galvanized carbon steel, they offer secure mounting even with wind speeds up to 75 m/s (270 km/h) for a long time.



HA-2240EN



YS-1100A

Long Range Horn Array Series

Specifications	HA-1030EN	HA-1060EN	HA-2120EN	HA-2240EN
Frequency response	360 Hz - 12 kHz (-20 dB)	350 Hz - 11 kHz (-20 dB)	290 Hz to 8 kHz (-20dB)	280 Hz to 8 kHz (-20 dB)
Amplification system	100 V / 70 V			
Sensitivity (1 W, 1 m)	109 dB	111 dB	113 dB	115 dB
Max. SPL (1 m)	123 dB	128 dB	133 dB	138 dB
Rated input (high impedance)	30 W	60 W	120 W	240 W
Rated impedance	670/330 Ω (170 Ω 70V speaker line only)	330/170 Ω (83 Ω 70V speaker line only)	170/83 Ω (42 Ω 70V speaker line only)	83/42 Ω (21 Ω 70V speaker line only)
Speaker component	4 x horn speaker unit	8 x horn speaker unit	3 x horn speaker driver	6 x horn speaker driver
Cord connector	Ceramic screw terminal	Ceramic screw terminal	Ceramic screw terminal, thermal fuse included	Ceramic screw terminal, thermal fuse included
Cord type	4-core cabtyre cord	4-core cabtyre cord	4-core cabtyre cord	4-core cabtyre cord
Cord length	2 m			
Operating temperature	-20 °C to +55 °C			
Finish	Aluminium white saltwater-resistant paint	Aluminium white saltwater-resistant paint	FRP* white paint Aluminium grille white paint Stainless steel	FRP* white paint Aluminium grille white paint Stainless steel
Dimensions (W x H x D)	167 x 665 x 140.5 mm	167 x 1233 x 140.5 mm	190 x 250 x 110 mm	215 x 1110 x 309 mm
Weight	8 kg	13.5 kg	16 kg	33 kg

*FRP = Fiber reinforced plastic

Your Partner for Sound

We supply sound,
not equipment.

Founded in 1934 in Kobe, Japan, we draw upon more than 90 years of experience in researching, developing and integrating commercial and professional audio and security equipment.

Our pride lies in the fact that we use this knowledge to create acoustic sound fields for millions of people to make their lives safer and more pleasant. Since its founding, TOA has pursued its business based upon a solid Management Philosophy, known as the “Three Confidences”. These important basic foundations will carry us into an even brighter and prosperous future.

In addition, at TOA “Smiles” convey more than mere satisfaction. They are a deeper expression - of security, of trust, and of emotions - and these are keys to the values we deliver. This rare involvement in every stage of people’s public lives has long been our reason for being, and it continues to be our highest corporate value.

TOA group is headquartered in Kobe and consists of 19 subsidiaries, which are divide into 5 regions.

- Japan
- East Asia
- South East Asia and Oceania
- South and North America
- Europe and Africa

Smiles for the Public

Your Support in EMEA Region

TOA Electronics Europe GmbH (TEE) is located in Hamburg, Germany, since 1973 and has branches in the UK, France, Poland, Benelux, Russia, South Africa, Dubai and Saudi-Arabia. Our Export Sales Team takes care of all other EMEA regions.

In each country we have certified distributors, who take care of our clients and their requirements. TOA has a very good relationship to all of its distributors and is in constant communication to get the best market knowledge.

Furthermore our European warehouse, which is also located in Hamburg, ensures immediate access to thousands of TOA products to offer you a high delivery performance.

Our Engineering Team supports you with:

System & Project Planning

Rack Assembling

Technical Support

Trainings & Seminars

- Expert knowledge in selecting the best system design for your project
- Sound coverage simulations using EASE®* planning the speaker positioning
- Technical expertise during system installation
- Assistance during the commissioning with all system documentation.

Let's plan your next project together!

Give us a call: **+49 (0) 40 25 17 19 0** or contact us via mail: **contact@toa-eu.com**

Dr. Sound

TOA acoustics expert

We supply sound, not equipment.

TOA Electronics Europe GmbH
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Specifications are subject to change without notice. 11|2025