



# Product Catalogue

We supply sound, not equipment



# ABOUT TOA



TOA HQ Japan



TOA UK

TOA Corporation - a leading global innovator and manufacturer of cutting-edge commercial audio and security equipment, providing voice evacuation and professional acoustic solutions in over 120 countries. Founded 1934 in Kobe, Japan, TOA benefits from many years' experience in research, development and international sales and marketing in the fields of public address and audio. TOA's expertise in sound guarantees quality and peace of mind when buying and installing our products. We pride ourselves that our knowledge in our six business fields: Voice Alarm, Intercom, ProSound, Distribution, Wireless and Conference Systems creates acoustic solutions for millions of people to make lives safer, communication easier and audio entertainment more pleasurable.

## OUR CORPORATE AIM

To pursue a high degree of specialization to meet professional standard.  
By thoroughly subdividing the market and developing creative products suited to each market segment, we aim to be an international corporation contributing to human society with "Sound and Communication".



## OUR THREE CONFIDENCES

Total confidence of our customers in the use of all products.

Total confidence of our associates in all business transactions.

Total confidence of our employees in all their effort.

## QUALITY ASSURANCE

TOA has received certification under ISO9001 international standards for quality assurance, in recognition of TOA's establishment of a total quality control system for manufacturing activities ranging from product planning to development, production, installation and after-sales service. Moreover, TOA has been focusing on protecting the Earth's environment as one of its key management themes, and actively promotes the development of technologies and products that reduce our impact on the earth. As a result of these efforts, TOA has also received ISO14001 certification, the international standards for environmental management systems.



JMI-0020  
ISO9001

Knowledge Square  
Headquarters  
Tokyo Branch  
Osaka Branch



JQA-EM1400  
ISO14001

Knowledge Square

## KEY



This icon indicates that this product meets the standards of EN 54. This means they have been individually certified for use in conjunction with fire detection systems.



This icon indicates that this product is fully compliant to the British Standard BS 5839 part 8 code of practise.



This icon indicates that this product complies with the Ingress Protection standard (IP). These icons show how different products perform within different types of weather conditions.



This icon indicates that ease data is available for this product.



## We supply sound, not equipment

Discover TOA sound solutions with the help of our Audio Expert, Dr Sound.



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# IP AUDIO

## IP-A1 SERIES

The IP-A1 Series allows audio integration via IP network with Video Management Systems (VMS) & SIP-based communication systems.

### IP CEILING SPEAKER

#### IP-A1PC238



- ▶ 16cm (6") cone-type speaker for in-ceiling installations.
- ▶ Receive SIP audio, ONVIF and Multicast.
- ▶ Local broadcast using internal audio files.
- ▶ 8W built-in amplifier.
- ▶ 2 control inputs and 1 control output.
- ▶ HTTP commands (receive).
- ▶ Audio file storage (20 files, total 80MB, WAV/MP3).
- ▶ Playback programs (Repeat, Weekly Timer).
- ▶ PoE powered.

### IP PAGING GATEWAY

#### IP-A1PG



- ▶ Convert SIP audio, ONVIF Audio, internal audio files or local audio source into Multicast streaming.
- ▶ GUI calendar scheduler function (up to 2,000 settings).
- ▶ System mute function to mute all broadcasts made by every single IP-A1 series device within the same network.
- ▶ 1 local audio input (LINE/MIC selectable, phantom power On/Off).
- ▶ 4 control inputs and 1 control output.
- ▶ HTTP commands (send/receive).

### IP HORN SPEAKER

#### IP-A1SC15



- ▶ 124dB (PoE+ powered) with IP66 rating for outdoor installations.
- ▶ Receive SIP audio, ONVIF and Multicast.
- ▶ Local broadcast using internal audio files.
- ▶ 8W (PoE)/15W(PoE+) built-in amplifier.
- ▶ 2 control inputs and 1 control output.
- ▶ HTTP commands (receive).
- ▶ Audio file storage (20 files, total 80MB, WAV/MP3).
- ▶ Playback programs (Repeat, Weekly Timer).
- ▶ PoE/PoE+ powered.

### IP AUDIO INTERFACE

#### IP-A1AF



- ▶ Receive SIP audio, ONVIF and Multicast.
- ▶ Local broadcast using internal audio files or local audio source.
- ▶ 1 audio input (LINE/MIC selectable, phantom power On/Off).
- ▶ 8W (PoE)/15W(PoE+) built-in amplifier, 1 LINE audio output.
- ▶ 2 control inputs and 1 control output.
- ▶ HTTP commands (receive).
- ▶ Audio file storage (20 files, total 80MB, WAV/MP3).
- ▶ Playback programs (Repeat, Weekly Timer).
- ▶ PoE/PoE+ powered.

## IP POWER AMPLIFIER 12W

### IP-A1PA12



- ▶ 12W amplifier to drive 100/70/25V line speakers.
- ▶ Receive SIP audio, ONVIF and Multicast.
- ▶ Local broadcast using internal audio files or local audio source.
- ▶ External amplifier input (100/70/25V) to share speakers between the built-in amplifier and external PA amplifier to be switched over.
- ▶ 1 audio input (LINE/MIC selectable, phantom power On/Off).
- ▶ 2 control inputs, 1 control output and 1 mute control input.
- ▶ HTTP commands (receive).
- ▶ Audio file storage (20 files, total 80MB, WAV/MP3).
- ▶ Playback programs (Repeat, Weekly Timer).
- ▶ PoE+ powered.

## IP MICROPHONE PANEL

### IP-A1MP



- ▶ Audio accessory unit to be used in conjunction with IP-A1 series devices for having two-way conversations or audio monitoring.
- ▶ Omni-directional electret condenser microphone.
- ▶ Momentary type push switch to initiate a call.
- ▶ Indicator lights during control input is being triggered.
- ▶ 1 control input and 1 control output.
- ▶ 1 electronically-balanced audio output (0dB, 200Ω).
- ▶ Surface or flush mounting with a standard electrical box.

### MB15B-BK

- ▶ Rack Mounting Bracket 1U and Blank Panel for NX-100.



### MB15B-J

- ▶ Rack Mounting Bracket 1U and Joint Panel for NX-100.



## IP REMOTE MICROPHONE

### IP-A1RM



- ▶ Angle adjustable gooseneck microphone with compressor effect.
- ▶ 10 function-assignable keys to initiate broadcasts or controls.
- ▶ GUI calendar scheduler function (up to 2,000 settings).
- ▶ System mute function to mute all broadcasts made by every single IP-A1 series device within the same network.
- ▶ 1 AUX audio input (LINE/MIC selectable, phantom power On/Off).
- ▶ 2 control inputs, 1 control output and 1 mute control input.
- ▶ Independent volume control for microphone and AUX input.
- ▶ HTTP commands (send/receive).
- ▶ Audio file storage (20 files, total 80MB, WAV/MP3).
- ▶ PoE powered.

## IP NETWORK AUDIO ADAPTORS

### NX-300



- ▶ Uses an advanced implementation of its Packet Audio streaming technology with 16-bit audio and sample rates up to 48kHz.
- ▶ Dual-channel device capable of one-way stereo signal paths or bi-directional (full-duplex) dual mono signals.
- ▶ A built-in WAV-file recorder allows recording and playback of up to eight messages, each up to 2 minutes in length, assignable to any broadcast pattern.
- ▶ System can be configured, controlled, and monitored via the supplied GUI software and via web browser.

### NX-100/NX-100S



- ▶ Real time transmission of high-quality audio via IP networks.
- ▶ Uses dedicated lines and internet for transmission to remote areas.
- ▶ Reduces communication costs by allowing the internet to be used.

## WHAT IS VOICE ALARM?

The world is changing and the way we evacuate people is also changing. Statistics indicate that people are 75% more likely to respond to a voice announcement than a traditional bell sounder and using voice to relay instructions gives greater control for those managing the situation. Public address and voice alarm systems greatly reduce the risk of delayed reaction to an emergency.

The increasing global population has seen huge growth in developments both residential and commercial. Tall multi floored complexes give emergency services the challenge of evacuating many people at one time. PA/VA systems give them the opportunity to give clear informative instructions to avoid panic. With bell sounding systems the assumption is to move to the nearest exit which could potentially be moving towards the risk rather than away. Voice alarm allows incident management to direct evacuees away from risk, move them to a place of safety or keep them contained if that is the safest option. The use of voice and zoned areas allows for evacuation using a clear action plan with defined areas for the process.

Voice Alarm systems are public address systems that link directly to a fire alarm that is triggered in the event of an emergency. Using pre-recorded messages or live announcements they are designed to help the evacuation of a building in the safest possible way.

Unlike a standard public address solutions voice alarm systems are regulated by the British Standard BS 5839-8 and the areas of design, installation, commissioning and maintenance should adhere to that as best practise. All new installations must use independently EN-54 certified products. It is a legal requirement for voice alarm for power supply equipment, control and indicating equipment and speakers such as the specialist TOA range to meet this standard to comply.





## VX-3000 SERIES

The VX-3000 Series is a reliable and energy-saving voice alarm system certified on the European Standard EN 54-16. It combines many functions for public address and voice alarm applications in one unit frame. The design feature of a low number of system components makes installation easy, saves space and reduces cable complexity enabling a rapid system configuration and cost-effective assembly.



- ▶ Can broadcast many different audio signals simultaneously, flexible speaker driving with up to 64 zones per amplifier.
- ▶ Scalable up to 256 remote microphones.
- ▶ Standby function for low power consumption during battery backup reduces the required battery capacity making it energy efficient.
- ▶ IP Network based.
- ▶ Advanced Ambient Noise Control (ANC).

## VX-3000 SERIES WALL MOUNT SYSTEM

The VX-3308WM wall mount system is a complete public address and voice alarm system in one unit including power supply and power amplifiers. The ideal solution for when space is tight but it is still a requirement for your premises to have voice alarm, this compact solution can be fitted in small/narrow environments.

### WALL MOUNT

#### VX-3308WM



- ▶ Fault status indication for each speaker line.
- ▶ Operation and audio signal status indication per amplifier.
- ▶ 8 control outputs by open-collector-transistor and 4 by 5A relays.
- ▶ 16 standard and 2 voltage-controlled control inputs with monitoring.
- ▶ IP network-based, max 160 units can be combined.
- ▶ Supplied with 2 x 300W amps.
- ▶ An optional amp can be added.

### BATTERY BOX

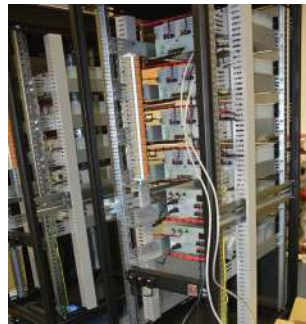
#### VX-3065BB



## CUSTOM-BUILT RACK SYSTEMS

Our highly skilled technical team design and build our custom-made voice alarm and public address rack systems in our workshop. They work on many specialised projects that ensure the end user can provide safe and reliable audio systems specifically designed for their building.

Our bespoke racks are installed in applications from theatres to large entertainment arenas, sports stadia, transport hubs, factories, office buildings and educational facilities – anywhere where the ability to be able to communicate quickly and effectively with people is paramount to their safety and security. In conjunction with being able to deliver announcements, in the event of an emergency, our flexible voice alarm and public address solutions enhance the ambience of buildings with background music whilst the ability to use zoned areas allows for dedicated audio in specific areas.



## VX-3000 COMPONENTS

### FRAMES

VX-3004F

VX-3008F

VX-3016F



- ▶ VX-3004F - Up to 4 amps (1-zone - 1 amp, 4 AB-zones or 3 AB-zones + standby amp).
- ▶ VX-3008F - Up to 3 amps (8 zones switching between 2 amps + standby amp or 8 zones freely assignable to 1 or 2 amps) .
- ▶ VX-3016F - Up to 2 amps (16 switched zones + standby amp or 2 x 8 switched zones).
- ▶ Status indication for each speaker line.
- ▶ Fault acknowledge and lap test button.
- ▶ Input DSP: flexible filtertypes and compressor.
- ▶ Output DSP: Flexible filtertypes, compressor and delay up to 2.7 sec.

## AMPLIFIERS

### VX-015DA

### VX-030DA

### VX-050DA



- ▶ Low loss modular class D amplifiers.
- ▶ Modules to be mounted in the frame units.
- ▶ Three different power levels: 150W, 300W, 500W.
- ▶ Can easily be removed and replaced simply by unplugging them; no need for specialist tools.
- ▶ Dust filter, easy to clean.
- ▶ 100V output with transformer resulting in lightweight units.
- ▶ Fuse easily accessible from the rear.

## POWER SUPPLY MANAGERS

### VX-3000DS

### VX-3150DS



- ▶ Supplies DC power to all system components.
- ▶ Combines two built-in power source units with a high-performance charger.
- ▶ Automatically switches to auxiliary battery power in the event of an AC power supply failure.
- ▶ EN 54-4 certified, Certificate No: 1134-CPR-137.
- ▶ Total wattage of the VX-3150DS-EB (1000W) is half the wattage of the VX-3000DS (2000W).
- ▶ Can be used VM-3000 Series.
- ▶ EN 54-4 and EN 54-16 Certified

## FIREMAN'S MICROPHONE

## FIREMAN'S MICROPHONE EXTENSION

## PAGING MICROPHONE

## REMOTE MICROPHONE EXTENSION UNIT

## PAGING MICROPHONE WITH LCD SCREEN

### RM-200SF

### RM-320F

### RM-300X

### RM-210F

### RM-500



- ▶ For emergency broadcasts made by fire officer to evacuate.
- ▶ For activation of emergency mode, start and stop automatic emergency broadcast announcements, reset emergency signals and live microphone announcements.
- ▶ CPU-switch for emergency broadcast to all zones.
- ▶ No general broadcasts can be made.
- ▶ Optional RM-320F extension available to increase number of function keys by 20.

- ▶ For both emergency and general purpose broadcast.
- ▶ Zone selection and all call.
- ▶ PC-programmable system software permits desired functions to be assigned to individual function keys (equipped with 2 LED indicators).
- ▶ Optional RM-210F extension available to increase number of function keys by 10.

- ▶ Up to 80 zones or functions can be selected.
- ▶ An external audio source can be broadcast from the RM-500.
- ▶ Speech intelligibility function makes it easier handling of the microphone.
- ▶ Control output and control input terminal.
- ▶ Wall mounting by optional wall mounting bracket.

### WB-RM200



- ▶ MountingBracket for RM-200

## VM-3000 SERIES

A highly reliable combined emergency voice and public address system. This system is digitally audio processed and controlled with fully digital audio mixing and a built in voice messaging feature.

### SYSTEM MANAGEMENT AMPLIFIERS

VM-3240VA

VM-3360VA

- ▶ 1 unit per system.
- ▶ 2 power outputs 240 W (VM-3240VA)/ 360 W (VM-3360VA).
- ▶ 6 recorded general announcements and 2 recorded emergency announcements.
- ▶ Maximum 8 remote microphones - up to 4 emergency remote microphones.
- ▶ 6 zones selectable from front panel and built in high quality electronic voice message.



### EXTENSION AMPLIFIERS

VM-3240E

VM-3360E

- ▶ System management amplifier can be expanded by connecting up to 9 extension amplifiers.
- ▶ 6 speaker line outputs.
- ▶ 8 control inputs and 8 control outputs for general purpose.
- ▶ 6 control inputs for emergency purpose and 3 control outputs for status information.
- ▶ Connection to system management amplifier via VM Link.





## SYSTEM AMPLIFIER

VP-2241INCL

VP-2421INCL

- ▶ With built in system amplifier input module VP-200VX.
- ▶ Module for transmission of status and audio signal between amplifier and control module.
- ▶ VP-2241INCL - 1 x 240w, VP-2421INCL - 1 x 420w.



## PILOT TONE DETECTION MODULE

VM-300SV

- ▶ Speaker line failure can be detected with high accuracy.
- ▶ Module for installation between the speaker line end and the emergency input terminal.



REMOTE  
MICROPHONE/  
ACTIVE ALARM

RM-200M-AL

REMOTE  
MICROPHONE

RM-200MS

REMOTE  
MICROPHONE  
EXTENSION UNIT

RM-210S

FIREMAN'S  
MICROPHONE

RM-300MF

FIREMAN'S  
MICROPHONE  
EXTENSION

RM-320F



- ▶ 11 function keys, 10 freely assignable.
- ▶ Zone, group and all call paging, and activating pre-recorded messages.
- ▶ Extraordinary clarity and freedom from distortion by built-in compression circuit.
- ▶ Up to 4 RM-200MS can be used per system management amplifier.
- ▶ AL version has an additional active alarm button.
- ▶ Up to 800m total cable length.
- ▶ Optional RM-210S extension available to increase the number of function keys by 10.

- ▶ For broadcasts made by firemen in emergency situations.
- ▶ For activation of emergency mode, start and stop automatic broadcasts of announcements, reset emergency signals and live microphone announcements.
- ▶ CPU-switch for emergency broadcast to all zones even in case of a CPU error.
- ▶ Up to 3 optional RM-320F extension units with an additional 20 function buttons per extension.
- ▶ System software allows assigning of functions to the individual keys.



# SPEAKERS: EN54

## CEILING SPEAKERS

The PC Series are a high quality range of ceiling speakers suitable for announcements and background music designed to complement modern architecture and decor.

### PC-1860BS



- ▶ Designed according to BS 5839-8: 2013 and EN54-24.
- ▶ Fire dome to prevent fire from spreading through the ceiling.
- ▶ Flat front panel.
- ▶ Quick and easy installation.
- ▶ Fire dome made of steel.
- ▶ Ceramic screw terminal block and thermal fuse.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ 12 cm speaker chassis.
- ▶ Sensitivity: 95 dB (1W, 1 m) (500Hz - 5kHz, pink noise)  
93 dB (1W, 1 m) (100Hz - 10kHz, pink noise)  
81 dB (1W, 4 m) (100Hz - 10kHz, pink noise)
- ▶ Frequency response: 170Hz - 20kHz (peak -20 dB).
- ▶ PC-1860BS-C version with additional DC capacitor.

### PC-1860BS-C

### PC-1865BS



- ▶ Designed according to BS 5839-8: 2013 and EN54-24.
- ▶ Fire dome to prevent fire from spreading through the ceiling.
- ▶ Flat front panel.
- ▶ Quick and easy installation.
- ▶ Fire dome made of steel.
- ▶ Ceramic screw terminal block and thermal fuse.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ 12 cm speaker chassis.
- ▶ Sensitivity: 95 dB (1W, 1 m) (500Hz - 5kHz, pink noise)  
93 dB (1W, 1 m) (100Hz - 10kHz, pink noise)  
81 dB (1W, 4 m) (100Hz - 10kHz, pink noise)
- ▶ Frequency response: 200Hz - 20 kHz (peak -20 dB).



### PC-1860AB-EB

- ▶ Integrated with two speaker units and a fire dome.
- ▶ Metallic construction.
- ▶ Spring catch mechanism for easy ceiling mounting.
- ▶ The input impedance can be easily selected by changing the tap position of the transformer.
- ▶ Screw terminal (steatite) makes input cable connections easy and allows bridge wiring.
- ▶ 2 x 6W rated input (10 V line), 6W, 3W, 1.5W.
- ▶ Sensitivity SPL max SPL: 92 dB (2x 0.5 W, 1 m) (500Hz - 5kHz, pink noise)  
102 dB (2x 6 W, 1 m) (500Hz - 5kHz, pink noise)
- ▶ Sensitivity EN-54 max SPL EN-54: 76 dB (2X 0.5 W, 4 m) (100Hz - 10kHz, pink noise).  
86.9 dB (2X 6 W, 4 m) (100Hz - 10kHz, pink noise).
- ▶ Frequency response: 170Hz - 20kHz.



# PENDANT SPEAKER

PE-154BS



- ▶ A two-way speaker for announcement and music applications.
- ▶ Certified to EN 54-24, ISO 7240-24 for use in voice alarm systems.
- ▶ Compliant with BS-5839-8: 2013.
- ▶ Specially designed to blend with lighting equipment.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W.
- ▶ Rugged HIPS resin enclosure.
- ▶ Excellent sound quality.
- ▶ Wide frequency range and stylish design.
- ▶ 3 m suspension fire resistant cable.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.



# PROJECTION SPEAKERS

PJ-154BS



- ▶ Certified according to EN 54-24, ISO 7240-24.
- ▶ Compliant with BS-5839-8.
- ▶ A two-way speaker for announcement and music applications.
- ▶ Stylish design to compliment lighting fixtures.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W.
- ▶ Wide frequency range.
- ▶ Supplied swivel bracket allows flexible speaker angle adjustment.
- ▶ Easy impedance setting by rotary switch.
- ▶ Paintable.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.



PJ-202DL-EB



- ▶ Certified to EN 54-24: 2008.
- ▶ Compliant with BS 5839-8: 2013 14.8.
- ▶ Bi-directional speaker.
- ▶ Designed for wall/ceiling installation indoor and outdoor.
- ▶ 20W rated input (100 V line) 20W, 10W, 5W.
- ▶ 2 x 5" cone speaker.
- ▶ Ceramic screw terminal.
- ▶ Rugged bracket included.
- ▶ Extreme wide temperature range: -25 °C to +70 °C.
- ▶ Sensitivity: 89 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 20kHz.



# SPEAKERS: EN54

## CABINET SPEAKERS

BS-1015BSB

BS-1015BSW



Designed to blend into the décor of modern builds this speaker is the ideal solution for offices, restaurants and retail units. This cost-effective high power PA cabinet speaker with 2-Way bass reflex.

- ▶ Certified to EN 54-24, ISO 7240-24 for use in voice alarm systems.
- ▶ Compliant with BS-5839-8: 2013.
- ▶ Low impedance (8Ω) or high impedance (100V) selectable by rotary switch.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W.
- ▶ Splashproof construction.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 20kHz.

### ACCESSORIES

SP-410

- ▶ Wall/ceiling mounting bracket



SP-420

- ▶ Flush mounting frame



ST-16A

- ▶ Speaker stand



BS-678AB-EB

This wall mount speaker is specifically designed for voice alarm applications in installations where AB wiring is required. The speaker structure permits direct wall mounting, with screws, which prevents the speaker from failing if an external force is applied. The input impedance can be easily altered by changing the tap position of the transformer.

- ▶ Certified to EN 54-24, ISO 7240-24 for use in voice alarm systems.
- ▶ Compliant with BS-5839-8: 2013.
- ▶ 2 x 6W rated input (100 V line) 6W, 3W, 1.5W.
- ▶ Sensitivity SPL max SPL: 92 dB (2x 0.5W, 1 m) (100Hz - 10kHz, pink noise)  
102 dB (2x 6W, 1 m) (100Hz - 10kHz, pink noise)
- ▶ Sensitivity EN-54 max SPL EN-54: 80 dB (2x 0.5W, 4 m) (100Hz - 10kHz, pink noise).  
90 dB (2x 6W, 4 m) (100Hz - 10kHz, pink noise).
- ▶ Frequency response: 155Hz - 20kHz.





BS-678BSB

BS-678BSW



These stylish and compact speakers are easy to wall-mount install either horizontally or vertically. With easy impedance selection and a push-style input terminal allowing for simple cable connections and bridge wiring they are ideal for background music and announcements.

- ▶ Certified to EN 54-24, ISO 7240-24 for use in voice alarm systems.
- ▶ Compliant with BS-5839-8: 2013.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 18kHz.

BS-680FC

BS-680FC-C



With surface or flush mounting this speaker offers high sound quality and sound pressure for horizontal or vertical installation. Bridging wiring is possible.

- ▶ Certified to EN 54-24, ISO 7240-24 for use in voice alarm systems.
- ▶ Compliant with BS-5839-8: 2013.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.
- ▶ BS-680FC-C with capacitor.



# SPEAKERS: EN54

## COLUMN SPEAKERS

The choice for all applications where excellent speech intelligibility is required: lecture rooms, houses of worship and auditoriums. These elegant 2-way-speakers provide crisp sound due to a built-in tweeter and are designed to give superb audio. The remarkably slim profile, with horizontal and vertical dispersion can be integrated unobtrusively into every interior setting.

### TZ-200BS

- ▶ Speakers coming with pan/tilt wall-mounting bracket.
- ▶ 20W rated input (100 V line) 20W, 10W, 5W.
- ▶ Wide temperature range.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 130Hz - 20kHz.

### TZ-400BS

- ▶ Speakers coming with pan/tilt wall-mounting bracket.
- ▶ 40W rated input (100 V line) 40W, 20W, 10W.
- ▶ Wide temperature range.
- ▶ Sensitivity: 93 dB (1W, 1 m).
- ▶ Frequency response: 110Hz - 20kHz.



## HORN SPEAKERS

### CS-64BS

This wide range speaker features an ABS resin enclosure and stainless steel bracket for all weather durability. Comprised of a high-efficiency weather-resistant horn and a high-quality sound cone speaker it provides clear and highly directional sound reproduction.

- ▶ Lightweight and rugged construction ideal for outdoor use.
- ▶ Exponential horn for improved directivity.
- ▶ High SPL.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 96 dB (1W, 1 m).
- ▶ Frequency response: 130Hz - 13kHz.



## CS-154BS

This speaker features an ABS resin enclosure and stainless steel bracket for all weather durability. Comprised of a highly efficient weather-resistant horn and a high-quality sound cone speaker it provides clear and highly directional sound reproduction. Equipped with a constant directivity horn (90° horizontal) to control sound directivity, realizing uniform and clear sound dispersion over a wide area.

- ▶ Weatherproof for outdoor use.
- ▶ High SPL.
- ▶ Impact-proof light weight.
- ▶ Stainless steel bracket.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W.
- ▶ Sensitivity: 97 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 15kHz.



## CS-761BS - B

## CS-761BS - W

This highly intelligible compact 2-way weatherproof music horn speaker is designed for announcements and background music in outdoor environments. Highly efficient with a high power input handling capacity the external speaker component is finished to ensure the unit's weatherproof ability and special paint coat prevents colour degradation, ensuring its long-lasting exterior condition. These models are designed with a rotary switch that facilitates hassle-free impedance change.

- ▶ Speech intelligibility and background music clarity.
- ▶ High sound pressure: 117 dB.
- ▶ Flexibility of mounting: on a platform, in the ceiling, on the wall or on a pole.
- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 7.5W.
- ▶ Sensitivity: 100 dB (1W, 1 m) (1Hz - 10kHz, pink noise)  
99 dB (1W, 1 m) (100Hz - 10kHz, pink noise)  
87 dB (1W, 4 m) (100Hz - 10kHz, pink noise)
- ▶ Frequency response: 100Hz - 20kHz.



## SC-615BS

Designed for clear announcements for voice alarm this paging horn speaker features an aluminium horn flare and stainless-steel bracket for all weather durability.

- ▶ Rugged and durable construction for reliable operation.
- ▶ Unique oval shape horn to enhance speech clarity.
- ▶ High SPL.
- ▶ Easy impedance selection.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W, 3W.
- ▶ Sensitivity: 109 dB (1W, 1 m).
- ▶ Frequency response: 315Hz - 12.5kHz.



## CEILING SPEAKERS

### FLUSH MOUNT CEILING SPEAKERS

The PC-Series are dual impedance speakers suitable for announcements and background music. The flat front panels make the design ideal for modern architecture delivering excellent audio in applications such as offices and retail units.

PC-1860



- ▶ 12 cm speaker chassis.
- ▶ Dust cover.
- ▶ Snap in cable terminal.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

PC-1860F



- ▶ 12 cm speaker chassis.
- ▶ Equipped with a fire dome.
- ▶ Snap in cable terminal.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 95 dB (1W, 1 m).
- ▶ Frequency response: 170Hz - 20kHz.

PC-1860S



- ▶ With mounting brackets.
- ▶ Snap in cable terminal.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

PC-1868W



- ▶ 12 cm speaker chassis.
- ▶ With metal grille and ABS resin baffle.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 16kHz.

PC-2360



- ▶ 16cm speaker chassis.
- ▶ Dust cover.
- ▶ Snap in cable terminal.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 60Hz - 20kHz.

PC-2852



- ▶ 20cm speaker.
- ▶ Push-in terminals.
- ▶ Bridge wiring.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W, 3W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 96 dB (1W, 1 m).
- ▶ Frequency response: 45Hz - 20kHz.

PC-2869



- ▶ 20cm speaker.
- ▶ Push-in terminals.
- ▶ Bridge wiring.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Low impedance 8Ω.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 40Hz - 20kHz.



## PC-648R



- ▶ High-cost performance speaker with spring clamp mechanism for easy mounting.
- ▶ PP resing and SECC punching net.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 16kHz.

## PC-658R



- ▶ High-cost performance speaker with spring clamp mechanism for easy mounting.
- ▶ PP resing and SECC punching net.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 18kHz.

## ATTENUATOR



- ▶ AT-4012-B (12 W)
- ▶ AT-4030-B (30 W)
- ▶ AT-4060-B (60 W)
- ▶ AT-4120-B (120 W)
- ▶ AT-4200-B (200 W)

Ergonomically designed for ease of use providing a comfortable grip and excellent control. An 8-step attenuator this series is built to provide precision volume control with a difference of 3dB in every step. The built-in overriding relay feature allows emergency paging indicated by the LED when activated.

## PC-3WR



- ▶ For humid or high temperature areas.
- ▶ Temperature range -10° to 50°.
- ▶ Fits in ø 150 mm holes.
- ▶ 3W rated input (100 V line) 3W, 1W.
- ▶ Sensitivity: 88 dB (1W, 1 m).
- ▶ Frequency response: 180Hz - 20kHz.

## PC-3CL



- ▶ Clean room/shower room speaker.
- ▶ Resistant against formalin and iodine solutions.
- ▶ Temperature range -20° to 60°
- ▶ IP64 certified weatherproof construction.
- ▶ Fit in ø 100 mm holes.
- ▶ 3W rated input (100 V line) 3W, 1W.
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.



## PC-5CL



- ▶ Clean room speaker.
- ▶ Sealed high molecular speaker membrane to prevent floating dust particles from contaminating the environment.
- ▶ Resistant against formalin.
- ▶ Fits in ø 98 mm holes.
- ▶ 5W rated input (100 V line).
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.



## F SERIES CEILING SPEAKERS

The F Series allows for an expanded listening area due to their extra-wide dispersion characteristics that are part of the speaker design allowing for non-frequency dependent directionality.

### FLUSH MOUNT CEILING SPEAKERS

#### F-122C



- ▶ Flat front panel.
- ▶ High power.
- ▶ Quick and easy installation.
- ▶ Heat-resistant back can.
- ▶ Diffuser for wide dispersion of high frequencies.
- ▶ 30W rated input (100 V line) 30W, 10W, 3W, 1W.
- ▶ 30W, 8Ω.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

#### F-1522SC



- ▶ Cost-effective full range speaker.
- ▶ Flat front panel.
- ▶ 117 mm mounting depth.
- ▶ Easy installation.
- ▶ Input selector switch permits easy verification and change of current impedance settings, even after installation.
- ▶ 6W rated input (100 V line) 6W, 3W.
- ▶ 6W, 8Ω.
- ▶ Sensitivity: 88 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 18kHz.

#### F-2322C



- ▶ Flat front panel.
- ▶ High power.
- ▶ Quick and easy installation.
- ▶ Heat-resistant back can.
- ▶ 30W rated input (100 V line) 30W, 10W, 3W, 1W.
- ▶ 30W, 8Ω.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

#### F-2352C



- ▶ 2-way speaker.
- ▶ High power.
- ▶ Quick and easy installation.
- ▶ Overload protection.
- ▶ Heat-resistant back can.
- ▶ Diffuser for wide dispersion of high frequencies.
- ▶ 30W rated input (100 V line) 30W, 10W, 3W, 1W.
- ▶ 30W, 8Ω
- ▶ Sensitivity: 89 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

#### F-2352SC



- ▶ 2-way wide range speaker.
- ▶ 154 mm mounting depth.
- ▶ Easy installation.
- ▶ Diffuser for wide dispersion of high frequencies.
- ▶ Without back for low profile ceilings with minimal depth.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W, 0.5.
- ▶ 6W, 8Ω.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

#### F-2852C



- ▶ 2-way speaker.
- ▶ High power.
- ▶ Quick and easy installation.
- ▶ Overload protection.
- ▶ Heat-resistant back can.
- ▶ Diffuser for wide dispersion of high frequencies.
- ▶ 60W rated input (100 V line) 60W, 30W, 15W 3W.
- ▶ 60W, 8Ω.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 60Hz - 20kHz.

## ACCESSORIES

HY-BC1



▶ Back Can

HY-TB1



▶ Tile Bar Bridge

HY-AH1



▶ Anchor Hanging Bracket

HY-TR1



▶ Trim Ring

HY-RR1



▶ Reinforcement Ring For F-1522SC

HY-RR2



▶ Reinforcement Ring



# SPEAKERS

## F SERIES CABINET SPEAKERS

A series of two-way speakers designed with high efficiency, wide range and high power input handling capabilities. Giving clear wide-area sound coverage they are ideal for applications such as retail units, restaurants and auditoria.



F-1000B

F-1000BT

F-1000BTWP

F-1000W

F-1000WT

F-1000WTP

- ▶ Compact wide-dispersion low impedance speaker.
- ▶ Dispersion angle of 90° x 90°.
- ▶ 2-way speaker with high quality 10 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ 30W rated input (8Ω).
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 85Hz - 20kHz.

- ▶ Dispersion angle of 90° x 90°.
- ▶ 2-way speaker with high quality 10 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ 15W rated input (100 V line) 15W, 5W, 3W, 1W.
- ▶ 8Ω.
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 85Hz - 20kHz.

- ▶ Weatherproof.
- ▶ Dispersion angle of 90° x 90°.
- ▶ 2-way speaker with high quality 10 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ Covered rear-mounted terminal block
- ▶ 15W rated input (100 V line) 15W, 5W, 3W, 1W.
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 85Hz - 20kHz.



F-1300B

F-1300BT

F-1300BTWP

F-1300W

F-1300WT

F-1300WTP

- ▶ Compact wide-dispersion low impedance speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 2-way speaker with high quality 13 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ 50W rated input (8Ω).
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

- ▶ Compact wide-dispersion high and low impedance speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 2-way speaker with high quality 13 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ 30W rated input (100V line) 60W, 30W, 15W, 3W.
- ▶ 8Ω.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

- ▶ Weatherproof.
- ▶ Compact wide-dispersion speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 2-way speaker with high quality 13 cm woofer and balanced dome tweeter.
- ▶ Pan-tilt wall/ceiling bracket included.
- ▶ Paintable.
- ▶ 30W rated input (100V line) 60W, 30W, 15W, 3W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.







F-2000B

F-2000W

- ▶ Compact wide-dispersion speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 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.
- ▶ 180 W continuous program.
- ▶ Wall/ceiling pan-tilt mounting bracket included.
- ▶ Paintable.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 20kHz.

F-2000BT

F-2000WT

- ▶ Compact wide-dispersion high and low impedance speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 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.
- ▶ Wall/ceiling pan-tilt mounting bracket included.
- ▶ Paintable
- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 3W.
- ▶ 8Ω.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 20kHz.

F-2000BTWP

F-2000WTWP

- ▶ Compact wide-dispersion high and low impedance speaker.
- ▶ Dispersion angle of 110° x 100°.
- ▶ 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.
- ▶ Wall/ceiling pan-tilt mounting bracket included.
- ▶ Paintable.
- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 3W.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 20kHz.

## F-1300/F-2000 SERIES SUBWOOFERS

FB-120B



FB-120W



Compact , indoor use subwoofer systems employing a high-power 30cm woofer. Designed for use with the F-1300 and F-2000 Series speakers.

- ▶ 600W rated input.
- ▶ Sensitivity:
  - 90 dB (1W, 1 m) at installation in free sound field.
  - 96 dB (1W, 1 m) at installation in 1/2 free sound field.
- ▶ Frequency response: 40Hz - 1.2kHz.

HY-CL10B



▶ Cluster Bracket

HY-CL20B



▶ Cluster Bracket

HY-CM10B



▶ Ceiling Mounting Bracket

HY-CM10W



▶ Ceiling Mounting Bracket

HY-CM20B



▶ Ceiling Mounting Bracket

HY-CM20W



▶ Ceiling Mounting Bracket

HY-BH10B



▶ Board Hanger Bracket

SP-131



▶ Pole Mounting Bracket

## CABINET SPEAKERS

Designed to be installed in applications to provide background music and announcements such as restaurants, retail outlets and hotels.

### BS-633A



- ▶ ABS resin.
- ▶ Can be hooked/mounted directly to wall.
- ▶ Push-in type input terminal makes cable connections easy and allows bridge wiring.
- ▶ Input impedance can be easily changed by changing the tap position of the transformer from the rear side of the speaker.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 15kHz.

### BS-633AT



- ▶ ABS resin.
- ▶ Can be hooked/mounted directly to wall.
- ▶ Push-in type input terminal makes cable connections easy and allows bridge wiring.
- ▶ Input impedance can be easily changed by changing the tap position of the transformer from the rear side of the speaker.
- ▶ AT version has a built-in attenuator and can be connected to 2-wire and 3-wire systems.
- ▶ 6W rated input (100 V line) 6W, 3W.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 15kHz.

### BS-680F



- ▶ Designed to golden ratio 1:1.618.
- ▶ Strong all-metal speaker.
- ▶ Can be surface or flush mounted horizontally or vertically.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W, 0.4W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.

### BS-678B

### BS-678

### BS-678BT

### BS-678T



- ▶ Input impedance can be easily changed by changing the tap position of the transformer
- ▶ Push-in type input connector makes cable connections easy and allows bridge wiring.
- ▶ Built-in 6-inch double cone speaker unit delivers a high-quality sound.
- ▶ T/BT versions have a built-in attenuator and can be connected to 2-wire or 3-wire systems.
- ▶ 6W rated input (100 V line) 6W, 3W, 1.5W, 0.8W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 15kHz.



### BS-634

### BS-634T



- ▶ Designed to golden ratio 1:1.618.
- ▶ Can be installed horizontally and vertically dependent on design needs.
- ▶ BS-634T version has an attenuator built-in.
- ▶ 6W rated input (100 V line) 6W, 3W.
- ▶ T version 6W (100 V line) only.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 18kHz.

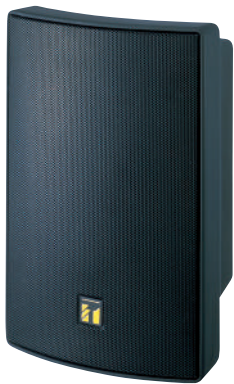
### BS-1034

### BS-1034S

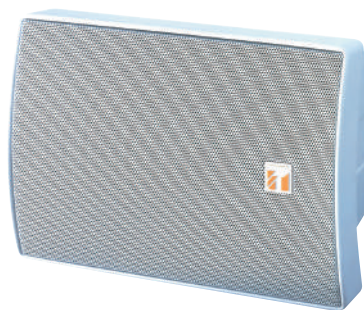


- ▶ Designed to golden ratio 1:1.618.
- ▶ Can be installed horizontally and vertically dependent on design needs.
- ▶ Comes in white (BS-1034) and silver (BS-1034S).
- ▶ 10W rated input (100 V line) 10W, 5W, 3W, 1W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 20kHz.

### BS-1030B



### BS-1030W



### SP-410



- ▶ Wall/ceiling mounting bracket

- ▶ Compact 2-way bass-replex speakers.
- ▶ Wide frequency range
- ▶ Can be used for both high-impedance and low-impedance applications.
- ▶ Splash-proof construction permits them to be installed under the eaves where the speaker is not directly exposed to rain.
- ▶ 30W rated input (100 V line) 30W, 20W, 15W, 10W, 5W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.



# SPEAKERS

## COMPACT SATELLITE SPEAKER SYSTEMS

Compact satellite speaker systems that can produce effective acoustic sound in commercial spaces like restaurants and retail stores.

### BS-301B

### BS-301W

- ▶ 4 small satellite speakers are designed to complement commercial spaces.
- ▶ Can be installed using metal fittings attachments.
- ▶ Subwoofer can be temporarily or permanently installed to enhance audio performance.
- ▶ Sensitivity: 81 dB (1W, 1 m).
- ▶ Frequency response: 40Hz- 20kHz x 2 channels.



## PENDANT SPEAKERS

TOA pendant speakers have been created specifically for ceiling suspension and designed to blend in with the architectural decor. Stylishly designed they are inspired by modern light fixtures and ideally suited for background music and announcements.

### PE-64

- ▶ Directly-attached 5 m (16.4 ft) cable allows the speaker to be suspended from the high ceiling.
- ▶ input power (impedance) can be easily changed at the upper side of the speaker.
- ▶ Easy to repaint to meet design needs.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 18kHz.

### PE-304BU

- ▶ 8 Ω and 25 V/70 V/100 V operation
- ▶ Input impedance is easily changed with a rotary switch on the top of the speaker.
- ▶ With speaker cable, GRIPPLE® hanging wire & safety wire pre-attached, for faster, easier and more secure installation.
- ▶ UL certified: UL Code: UL1480 UUMW, ULC-S541Bass-reflex type.
- ▶ 30W rated input (100 V line) 30W, 10W, 3W, 1.3W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 95Hz - 20kHz

### PE-304

- ▶ Directly-attached 5 m (16.4 ft) cable allows the speaker to be suspended from the high ceiling.
- ▶ input power (impedance) can be easily changed at the upper side of the speaker.
- ▶ Easy to repaint to meet design needs.
- ▶ 30W rated input (100 V line) 30W, 20W, 15W, 10W, 5W.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

### PE-604BU

- ▶ 8 Ω and 25 V/70 V/100 V operation
- ▶ Input impedance is easily changed with a rotary switch on the top of the speaker.
- ▶ With speaker cable, GRIPPLE® hanging wire & safety wire pre-attached, for faster, easier and more secure installation.
- ▶ UL certified: UL Code: UL1480 UUMW, ULC-S541Bass-reflex type.
- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 3W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 110Hz - 20kHz

### PE-304WU

### PE-604WU





## PROTECTION SPEAKERS

Projection speakers are designed for ceiling and wall installations. Ideal for applications where décor is important and for speech and music.

### PJ-64

- ▶ Can be re-painted to meet design needs.
- ▶ Supplied swivel bracket allows for flexible speaker angle adjustment.
- ▶ Input power (impedance) can be easily changed at the upper side of the speaker.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 18kHz.

### PJ-304

- ▶ Can be re-painted to meet design needs.
- ▶ Supplied swivel bracket allows for flexible speaker angle adjustment.
- ▶ Input power (impedance) can be easily changed at the upper side of the speaker.
- ▶ 30W rated input (100 V line) 30W, 20W, 15W, 10W, 5W.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.



### PJ-100W

- ▶ Suitable for background music and information broadcast.
- ▶ 10W rated input (100 V line) 10W, 5W, 2.5W.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 65Hz - 15kHz.

### PJ-200W

- ▶ Suitable for background music.
- ▶ 20W rated input (100 V line) 20W, 10W, 5W.
- ▶ Sensitivity: 95 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.



### PJ-202DL

- ▶ Suitable for indoor and outdoor applications.
- ▶ 2 x 5" cone speaker.
- ▶ Comes with robust bracket.
- ▶ Waterproof.
- ▶ 20W rated input (100 V line) 20W, 10W, 5W.
- ▶ Sensitivity: 76 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 20kHz.



## INTERIOR DESIGN SPEAKERS

Designed for background/foreground and paging the H-Series of speakers offer a sleek and stylish solution to blend with modern architecture. The design allows minimum reflection to reduce sound waves. The H-2 and H-3 speakers are also available in a watereproof version.

H-1



- ▶ 12W rated input (100 V line) 12W, 6W, 3W.
- ▶ Sensitivity: 85 dB (1W, 1 m).
- ▶ Frequency response: 120Hz - 20kHz

H-2



- ▶ 12W rated input (100 V line) 12W, 6W, 3W.
- ▶ Sensitivity: 88 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 20kHz

H-2WP

H-3



- ▶ 30W rated input (100 V line) 30W, 15W, 7.5W.
- ▶ Sensitivity: 89 dB (1W, 1 m).
- ▶ Frequency response: 100 Hz - 20kHz

H-3WP

HB-1

The HB-1 is a high-power, wall/ceiling-mounted subwoofer system employing a 20 cm speaker unit. Although small in size, the HB-1 provides clear super-low frequency sound reproduction thanks to its Acoustic Super Woofer enclosure construction.

- ▶ 240W rated input (continuous program, 80W (continuous pink noise).
- ▶ Sensitivity: 91 dB (1W, 1 m) (installation in 1/2 free sound field).
- ▶ Frequency response: 45Hz - 20 kHz.



## GARDEN SPEAKER

GS-302

A stylish, attractively designed outdoor speaker that blends into its surroundings. Highly reliable performance with splashproof construction.

- ▶ 30W rated input (100V line), 30W, 15W, 10W, 5W, 3W.
- ▶ Sensitivity: 87 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 8 kHz.



# COLUMN SPEAKERS

For applications that require exceptional speech intelligibility such as lecture rooms, houses of worship and auditoriums where public announcements are important.

TZ-206B

TZ-206W



- ▶ 20W rated input (100 V line) 20W, 10W, 5W, 2.5W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 16kHz.

TZ-206BWP

TZ-206WWP



- ▶ Waterproof.
- ▶ 20W rated input (100 V line) 20W, 10W, 5W, 2.5W.
- ▶ Sensitivity: 89 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 13kHz.

TZ-30-EB



- ▶ 30W rated input (100 V line) 30W, 15W, 7.5W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.

TZ-406B

TZ-406W



- ▶ 40W rated input (100 V line) 40W, 20W, 10W, 5W.
- ▶ Sensitivity: 93 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 16kHz.

TZ-406BWP

TZ-406WWP



- ▶ Waterproof.
- ▶ 40W rated input (100 V line) 40W, 20W, 10W, 5W.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 13kHz.

TZ-50-EB



- ▶ 50W rated input (100 V line) 50W, 25W, 12.5W.
- ▶ Sensitivity: 91 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 20kHz.

TZ-606B

TZ-606W



- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 7.5W.
- ▶ Sensitivity: 95 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 16kHz.

TZ-606BWP

TZ-606WWP



- ▶ 60W rated input (100 V line) 60W, 30W, 15W, 7.5W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 16kHz.

## H AND S SERIES LINE ARRAY SPEAKERS

The H- Series slim line array speakers have excellent directivity. With their narrow 84mm design allows this range to fit in with the interior décor of venues,

The S-Series are a 2-way line array speaker with 8 10cm woofers and 24 high-frequency drivers installed vertically.

Sync-Drive technology creates the ideal linear sound source providing clear sound with reduced attenuation over distance in both the H and S Series.

- ▶ Reflection-free and feedback resistant
- ▶ Models come in curved or straight designs.
- ▶ WP models are waterproof.
- ▶ Multiple mounting accessories available
- ▶ S Series are splashproof
- ▶ Optional matching transformers available for high-impedance operation

SR-H2L



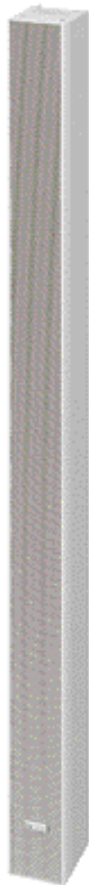
- ▶ Height: 668.4mm.
- ▶ 180W.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 18 kHz.

SR-H2S



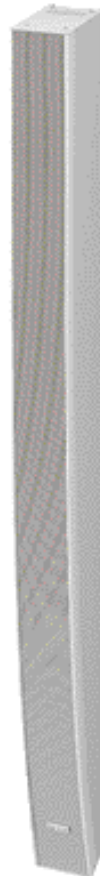
- ▶ Height: 663.4mm.
- ▶ 180W.
- ▶ Sensitivity: 90 dB (1W, 1 m).
- ▶ Frequency response: 90Hz - 17 kHz.

SR-H3L



- ▶ Height: 1186.4mm.
- ▶ 300W.
- ▶ Sensitivity: 95 dB (1W, 1 m).
- ▶ Frequency response: 110Hz - 18kHz.

SR-H3S



- ▶ Height: 1177.2mm.
- ▶ 300W.
- ▶ Sensitivity: 92 dB (1W, 1 m).
- ▶ Frequency response: 90Hz - 17kHz.

SR-S4L



- ▶ Height: 895mm.
- ▶ 600W.
- ▶ Sensitivity: 94 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

SR-S4S



- ▶ Height: 892mm.
- ▶ 600W.
- ▶ Sensitivity: 93 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

SR-S4LWP

SR-S4SWP





## H AND S LINE ARRAY SPEAKER ACCESSORIES

<p><b>SR-EP3</b></p>  <ul style="list-style-type: none"> <li>▶ Extentionn Plate.</li> <li>▶ For H Series.</li> </ul>	<p><b>SR-EP4</b></p>  <ul style="list-style-type: none"> <li>▶ Extension Plate.</li> <li>▶ For S Series.</li> </ul>	<p><b>SR-EP4WP</b></p>  <ul style="list-style-type: none"> <li>▶ Extention Plate.</li> <li>▶ For S Series.</li> </ul>	<p><b>SR-TB3</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Tilt Brcket.</li> <li>▶ For H Series.</li> </ul>	<p><b>SR-TB4</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Tilt Bracket.</li> <li>▶ For S Series.</li> </ul>
<p><b>SR-TB4WP</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Tilt Bracket</li> </ul>	<p><b>SR-WB3</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Mounting Bracket.</li> <li>▶ For H Series.</li> </ul>	<p><b>SR-WB4</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Mounting Bracket.</li> <li>▶ For S Series.</li> </ul>	<p><b>SR-WB4WP</b></p>  <ul style="list-style-type: none"> <li>▶ Wall Mounting Bracket</li> </ul>	<p><b>SR-FB3</b></p>  <ul style="list-style-type: none"> <li>▶ Flying Bracket</li> <li>▶ For H Series.</li> </ul>
<p><b>SR-FB4</b></p>  <ul style="list-style-type: none"> <li>▶ Flying Bracket</li> <li>▶ For S Series.</li> </ul>	<p><b>SR-FS4</b></p>  <ul style="list-style-type: none"> <li>▶ Floor Stand</li> </ul>	<p><b>SR-PP4</b></p>  <ul style="list-style-type: none"> <li>▶ Protection Pad</li> </ul>	<p><b>SR-SA3</b></p>  <ul style="list-style-type: none"> <li>▶ Stand Adapter</li> <li>▶ For H Series.</li> </ul>	<p><b>SR-SA4</b></p>  <ul style="list-style-type: none"> <li>▶ Stand Adapter</li> <li>▶ For S Series.</li> </ul>
<p><b>MT-S0301</b></p>  <ul style="list-style-type: none"> <li>▶ Matching Transformer.</li> <li>▶ 30W.</li> <li>▶ For SR-H.</li> </ul>	<p><b>MT-S0601</b></p>  <ul style="list-style-type: none"> <li>▶ Matching Transformer.</li> <li>▶ 60W.</li> <li>▶ For SR-S.</li> </ul>			

# SPEAKERS

## LONG RANGE LINE ARRAY SPEAKERS

### HA-1010-EB



A slim horn array speaker with an extremely long range. It can spread sound over 600m while a conventional speaker can cover only 300m. Ideal for applications where you need to transport information over an extreme long distance the horn array speaker also eases the intelligibility in standard distances and under extreme situations.

Installing large numbers of speakers in order to deliver announcements may lose intelligibility before the sound reaches the target area due to speaker interference from one another. The HA-1010-EB is composed of multiple horn speakers positioned in an array and can not only reduce the total number of speakers, but also can achieve a better speech intelligibility.

- ▶ 180W (100 V line).
- ▶ Sensitivity: 114 dB (1W, 1 m).
- ▶ Frequency response: 350Hz - 7kHz.

The long-range speakers in this Series are composed of multiple speakers positioned in an array. Highly efficient, they can deliver clear sound at distance without acoustic correction. The built-in high-pass filter cuts the bass that can damage a speaker. With their drip-proof structures and salt-resistant finish they are durable and suitable for permanent outdoor installation.

### HA-1030-EB

- ▶ 30W (100 V Line) 30W, 15W.
- ▶ Sensitivity:
  - 110 dB (1W, 1 m).
  - 105 dB (1W, 1 m) (100Hz - 10kHz, pink noise).
  - 93 dB (1W, 4 m) (100Hz - 10 kHz, pink noise)
- ▶ Frequency response: 390Hz - 11kHz.

### HA-1060-EB

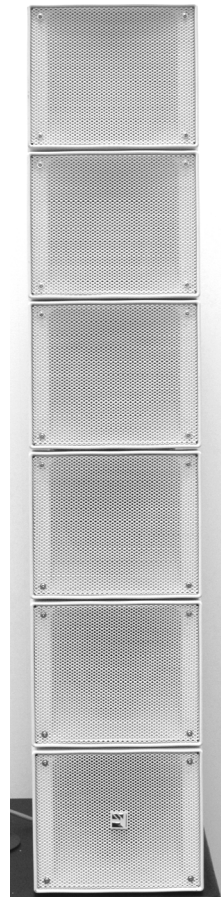
- ▶ 60W (100 V Line) 60W, 30W.
- ▶ Sensitivity:
  - 113 dB (1W, 1 m).
  - 107 dB (1W, 1 m) (100Hz - 10kHz, pink noise).
  - 95 dB (1W, 4 m) (100Hz - 10 kHz, pink noise).
- ▶ Frequency response: 380Hz - 7kHz.

### HA-2120-EB

- ▶ 120W (100 V Line) 120W, 60W.
- ▶ Sensitivity:
  - 114 dB (1W, 1 m).
  - 109 dB (1W, 1 m) (100Hz - 10kHz, pink noise).
  - 97 dB (1W, 4 m) (100Hz - 10 kHz, pink noise)
- ▶ Frequency response: 330Hz - 8kHz.

### HA-2240-EB

- ▶ 240W (100 V Line) 240W, 120W.
- ▶ Sensitivity:
  - 117 dB (1W, 1 m).
  - 111 dB (1W, 1 m) (100Hz - 10kHz, pink noise).
  - 99 dB (1W, 4 m) (100Hz - 10 kHz, pink noise).
- ▶ Frequency response: 320Hz - 8kHz.



## COAXIAL ARRAY SPEAKERS

Ideal for mobile and fixed installations in schools, banquet rooms or clubs these coaxial array speakers can also be used as a floor monitor. 2-way units equipped with a large diameter subwoofer and array tweeter they offer well-controlled sound coverage.

### HS-120B

### HS-1200BT

### HS-150B

### HS-1500BT

### HS-120W

### HS-1200WT

### HS-150W

### HS-1500WT

- ▶ Rated input: 8Ω 100W.
- ▶ Sensitivity: 97 dB (1W, 1 m).
- ▶ Frequency response: 80Hz - 20kHz.

- ▶ Raated input 60W (100V Line) 60W, 30W, 15W.
- ▶ Sensitivity: 97 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

- ▶ Rtaed input: 8Ω 100 W.
- ▶ Sensitivity: 98 dB (1W, 1 m).
- ▶ Frequency response: 70Hz - 20kHz.

- ▶ Rated input: 60W (100 V line) 60W, 30W, 15W.
- ▶ Sensitivity: 98 dB (1W, 1 m).
- ▶ Frequency response: 60Hz - 20kHz.



## HS SERIES ARRAY SPEAKER ACCESSORIES

### HY-1200HB

### HY-1200HW

### HY-1200VB

### HY-1200VW



▶ For wall/ceiling

▶ For wall/ceiling

▶ For wall/ceiling

▶ For wall/ceiling

### HY-1500HB

### HY-1500HW

### HY1500VB

### HY-1500VW



▶ For wall/ceiling

▶ For wall/ceiling

▶ For wall/ceiling

▶ For wall/ceiling

### HY-CO801\*

### HY-CO801W\*

### HY-WO801\*

### HY-WO801\*



▶ For ceiling

▶ For ceiling

▶ For wall

▶ For wall

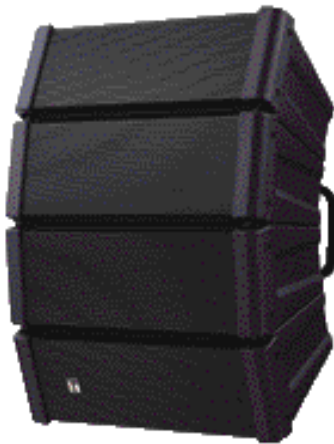
# SPEAKERS

## HX-5 SERIES VARIABLE LINE ARRAY SPEAKERS

2-way compact speaker systems that permit both constant directivity control over a wide frequency range and changes in directivity. Ideal for reproducing clear sound in spaces with long reverberation times or high background noises.

### HX-5B

- ▶ High power handling.
- ▶ Parallel connectors - dual speakon and screw terminal.
- ▶ Ball impact proof.
- ▶ Designed for indoor use.
- ▶ 600W rated input.
- ▶ Sensitivity: 114 dB (1W, 1 m).
- ▶ Frequency response:
  - 70Hz - 20kHz (-10 dB) (60° mode).
  - 75Hz - 20kHz (-10 dB) (45° mode).
  - 80Hz - 20kHz (-10 dB) (30° mode).
  - 85Hz - 20kHz (-10 dB) (15° mode).



### HX-5W

- ▶ High power handling.
- ▶ Parallel connectors - dual speakon and screw terminal.
- ▶ Ball impact proof.
- ▶ Weatherproof designed for outdoor use.
- ▶ 600W rated input.
- ▶ Sensitivity: 114 dB (1W, 1 m).
- ▶ Frequency response:
  - 95Hz - 20kHz (-10 dB) (60° mode).
  - 100Hz - 20kHz (-10 dB) (45° mode).
  - 105Hz - 20kHz (-10 dB) (30° mode).
  - 110Hz - 20kHz (-10 dB) (15° mode).



## HX-5 SERIES SUBWOOFERS

### FB-120B



### FB-120W



A compact, indoor-use subwoofer system employing a high-power 30 cm (12") woofer. It is designed for use with HX-5 series - ideal for reproducing dynamic low-frequency sound for both permanent and temporary installations.

- ▶ 600W rated input.
- ▶ Sensitivity:
  - 90 dB (1W, 1 m) at installation in free sound field.
  - 96 dB (1W, 1 m) at installation in 1/2 free sound field.
- ▶ 40Hz - 1.2kHz.





## HX-5 SERIES VARIABLE LINE ARRAY SPEAKER ACCESSORIES

HY-CN1B



- ▶ Extension Bracket - Black

HY-CN1B-WP



- ▶ Extension Bracket - Black Waterproof

HY-CN1W



- ▶ Extension Bracket - White

HY-CN1W-WP



- ▶ Extension Bracket - White Waterproof

HY-CW1B



- ▶ Ceiling Bracket - Black

HY-CW1W



- ▶ Ceiling Bracket - White

HY-CW1WP



- ▶ Ceiling Bracket - Waterproof

HY-PF1B



- ▶ Rigging Frame - Black

HY-PF1W



- ▶ Rigging Frame - White

HY-PF1WP



- ▶ Rigging Frame - Waterproof

HY-ST1



- ▶ Stand Adapter

HY-WM1B



- ▶ Wall Bracket - Black

HY-WM1W



- ▶ Wall Bracket - White

HY-WM1WP



- ▶ Wall Bracket - Waterproof

HY-WM2B



- ▶ Wall Bracket (flush-mount) - Black

HY-WM2W



- ▶ Wall Bracket (flush-mount) - White

HY-WM2WP



- ▶ Wall Bracket (flush-mount) - Waterproof

MT-200



- ▶ Matching Transformer

# SPEAKERS

## HX-7 SERIES VARIABLE LINE ARRAY SPEAKERS

2-way compact speaker systems that permit both constant directivity control over a wide frequency range and changes in directivity. Its built-in isophasic wavefront control horn with compression driver, ensures precise HF control and superior reproduction of HF sounds in spaces with long reverberation times or high background noises.

### HX-7B

- ▶ High power handling.
- ▶ Parallel connectors - dual speakon and screw terminal.
- ▶ Ball impact proof.
- ▶ For indoor use.
- ▶ 750W rated input.
- ▶ Sensitivity: 100 dB (1W, 1 m).
- ▶ Frequency response: 75Hz - 20kHz

### HX-7W

### HX-7B-WP

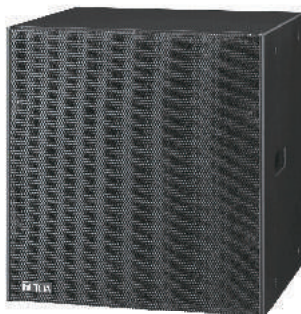
### HX-7W-WP

- ▶ High power handling.
- ▶ Parallel connectors - dual speakon and screw terminal.
- ▶ Ball impact proof.
- ▶ Weatherproof designed to be installed under eaves for outdoor use.
- ▶ 750W rated input.
- ▶ Sensitivity: 100 dB (1W, 1 m).
- ▶ Frequency response: 105Hz - 20kHz.



## HX-7 SERIES SUBWOOFERS

### FB-150B



### FB-150W



A compact, indoor-use subwoofer system employing a high-power 38 cm (15") woofer. It is designed for use with the HX-7 series - Ideal for reproducing dynamic low-frequency sound for both permanent and temporary installations.

- ▶ 600W rated input.
- ▶ Sensitivity: 93 dB (1W, 1 m).
- ▶ 40Hz - 400Hz.

## HX-7 SERIES VARIABLE LINE ARRAY SPEAKER ACCESSORIES

HY-60DB



- ▶ Angle Adjustment Bracket - Black

HY-60DB-WP



- ▶ Angle Adjustment Bracket - Black Waterproof

HY-60DW



- ▶ Angle Adjustment Bracket - White

HY-60DW-WP



- ▶ Angle Adjustment Bracket - White Waterproof

HY-CN7B



- ▶ Extension Bracket - Black

HY-CN7B-WP



- ▶ Extension Bracket - Black Waterproof

HY-CN7W



- ▶ Extension Bracket - White

HY-CN7W-WP



- ▶ Extension Bracket - White Waterproof

HY-MS7B-WP



- ▶ Wall Mount Bracket - Black Waterproof

HY-MS7W-WP



- ▶ Wall Mount Bracket - White Waterproof

HY-MT7



- ▶ Matching Transformer Adaptor

HY-PF7B



- ▶ Rigging Frame - Black

HY-PF7W



- ▶ Rigging Frame - White

HY-ST7



- ▶ Stand Adapter

HY-TM7B-WP



- ▶ Rigging Bracket - Black Waterproof

HY-TM7W-WP



- ▶ Rigging Bracket - White Waterproof

HY-VM7B



- ▶ Rigging Bracket - Black

HY-VM7W



- ▶ Rigging Bracket - White

HY-WM7B



- ▶ Wall Bracket - Black

HY-WM7W



- ▶ Wall Bracket - White

MT-200



- ▶ Matching Transformer

# SPEAKERS

## HORN SPEAKERS

Horn speakers designed to make public address and music clear and intelligible in many applications both indoors and outdoors.

### WIDE RANGE HORN SPEAKERS

#### CS-64



- ▶ Wide-range paging speaker for voice paging, background music and tone signalling distribution.
- ▶ Exponential shaped horn improves directivity characteristics and ensures uniform and clear sound dispersion.
- ▶ Weatherproof polyurethane resin paint and impact-proof lightweight ABS resin enclosure.
- ▶ Stainless steel hardware protects the speaker from corrosion.
- ▶ 6W rated input (100 V line) 6W, 3W, 1W.
- ▶ Sensitivity: 96 dB (1W, 1 m).
- ▶ Frequency response: 130Hz - 13kHz.

#### CS-154

#### CS-304



- ▶ Wide-range paging speaker for voice paging, background music and tone signalling distribution.
- ▶ Constant directivity horn improves directivity characteristics and ensure uniform and clear sound dispersion.
- ▶ High sensitivity: up to 98 dB (1W/1m).
- ▶ Weatherproof polyurethane resin paint and impact-proof lightweight ABS resin enclosure.
- ▶ Stainless steel hardware protects the speaker from corrosion.
- ▶ 15W rated input (100 V line) 15W, 10W, 5W.
- ▶ Sensitivity: 97 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 15kHz.



### MUSIC HORN SPEAKERS

#### CS-761B



#### CS-761W



- ▶ Compact 2-way weatherproof speaker systems are designed for high efficiency and have a high power input handling capacity.
- ▶ Highly intelligible speakers suited for public address announcement and background music in outdoor environments.
- ▶ The external speaker component is finished to ensure the unit's weatherproof ability.
- ▶ Special paint coat prevents color degradation, ensuring its long-lasting exterior condition.
- ▶ 60W rated input (100 V line) 30W, 15W, 7.5W.
- ▶ Sensitivity: 100 dB (1W, 1 m).
- ▶ Frequency response: 100Hz - 120kHz.



## PAGING RANGE HORN SPEAKERS



The SC Series are highly intelligible speakers ideal for public address announcements. Extremely durable with powder coating and stainless steel brackets, they are robust and reliable for outdoor use.

### SC-610

- ▶ 10W rated input.
- ▶ Sensitivity: 110 dB.
- ▶ Frequency response: 315Hz - 12.5kHz.

### SC-615

- ▶ 15W rated input.
- ▶ Sensitivity: 112 dB.
- ▶ Frequency response: 280Hz - 12.5kHz.

### SC-630

- ▶ 30W rated input.
- ▶ Sensitivity: 113 dB.
- ▶ Frequency response: 250Hz - 10kHz.

### SC-651

- ▶ 50W rated input.
- ▶ Sensitivity: 109dB (1W, 1 m).
- ▶ Frequency response: 250Hz - 6kHz.

### SC-610M

- ▶ 10W rated input (100 V line)  
10W, 5W, 2.5W, 1.5W, 0.5W.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 315Hz - 12.5kHz.

### SC-615M

- ▶ 15W rated input (100 V line)  
15W, 7.5W, 5W, 2.5W, 1.5W.
- ▶ Sensitivity: 112 dB (1W, 1 m).
- ▶ Frequency response: 280Hz - 12.5kHz.

### SC-630M

- ▶ 30W rated input (100 V line)  
30W, 15W, 7.5W, 5W, 2.5W.
- ▶ Sensitivity: 113 dB (1W, 1 m).
- ▶ Frequency response: 250Hz - 10kHz.



## POWERED HORN SPEAKER

### SC-P620



- ▶ Integrated 20W power amplifier which utilises latest Class D technology.
- ▶ Switchable Gain: 8dB, 16dB, 24dB & 32dB.
- ▶ Internal volume control to allow on-site tuning.
- ▶ Integration to CCTV systems possible with the majority of IP CCTV systems equipped with an audio line output.
- ▶ Can operate at extreme temperatures.
- ▶ 15W rated input.
- ▶ Sensitivity: 113 dB (1W, 1 m).
- ▶ Frequency response: 250Hz - 10kHz.

## SC HORN SPEAKER ACCESSORIES

### SP-201



- ▶ Speaker Mount Bracket

### SP-301



- ▶ Speaker Mount Bracket

### SP-131



- ▶ Pole Mount Bracket

### PoE Splitter



- ▶ For use with SC-P620

### SKT-IEC-S5000



- ▶ APH Power Supply Lead

# SPEAKERS

## COMBINED HORN SPEAKERS

These general-purpose speakers are suited to public address announcement applications. Its external speaker component finished with powder coating, and stainless steel screws ensure the unit's weatherproof capability for outdoor use.



TC-615



- ▶ 15W rated input.
- ▶ Sensitivity: 106 dB (1W, 1 m).
- ▶ Frequency response: 250Hz - 7kHz.

TC-615M



- ▶ 15W rated input (100 V line) 15W, 10W, 5W, 3W.
- ▶ Sensitivity: 108 dB (1W, 1 m).
- ▶ Frequency response: 250Hz - 7kHz.

TC-631



- ▶ 30W rated input.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 200Hz - 6kHz.

TC-63M



- ▶ 30W rated input (100 V line) 30W, 15W, 10W, 5W.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 200Hz - 6kHz.

TC-651M



- ▶ 50W rated input (100 V line) 50W, 30W, 15W..
- ▶ Sensitivity: 111 dB (1W, 1 m).
- ▶ Frequency response: 200Hz - 6kHz.

## SEPARATE HORN SPEAKERS

TH-650



TH-660



The TH horn speakers are used in conjunction with optional driver units. Its powder-coated finish, and stainless steel screws ensure the unit's weatherproof capability.

- ▶ Round shape ensures high speech clarity and sound quality and symmetrical sound dispersion - also suitable for music reproduction.
- ▶ Shock-resistant.
- ▶ Sensitivity: 110 dB (1W, 1 m) (when operated with a driver).
- ▶ Frequency response: 200 Hz - 6 kHz ( When the TU-631, TU-631 M, TU-651 or TU-651 M is used) 200 Hz - 8 kHz ( When the TU-660 or TU-660M is used).

## TH SERIES HORN SPEAKER DRIVER UNITS

TU-631



- ▶ 30W rated input.
- ▶ M Version 30W (100 V line) 30W, 15W, 10W, 5W.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 6kHz.

TU-651



- ▶ 50W rated input.
- ▶ M Version 50W (100 V line) 50W, 30W, 15W.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 6kHz.

TU-660



- ▶ 60W rated input.
- ▶ M Version 60W (100 V line) 50W, 30W, 15W.
- ▶ Sensitivity: 110 dB (1W, 1 m).
- ▶ Frequency response: 150Hz - 8kHz.

TU-660M



## THE IMPORTANCE OF IMPEDANCE READINGS

“Measuring speaker impedances is an important part of any audio installation.”

Dr Sound.



Amplifiers either come with low-impedance speaker outputs (indicated as 4Ω, 8Ω, 16Ω, etc) or high-impedance outputs (indicated as 70V, 100V etc). Low impedance outputs often are used when a small number of speakers (1 to 4) are used on a system where there is a short cable run (up to 10 metres) between amplifiers and speakers, for example a main PA system in a music venue.

High-impedance systems are used when installing a large number of speakers over long distance cable runs. These speakers have transformers fitted which is what makes them high-impedance. In a typical paging system (used for communicating to people over say an office block), high impedance systems are the preferred option.

In any PA system, be it low or high, the total load of the loudspeakers should be higher or equal to the output impedance of the amplifier. When the total speaker impedance is lower than the amplifier output impedance, the amplifier will not perform efficiently and can be damaged. For these reasons an Impedance meter is a vital piece of test equipment for any sound engineer working on these kinds of systems. It provides confirmation that the design is correct and that the speaker load measured is correct for the amplifier. (The TOA ZM-104A produces a 1Khz tone so it is possible to audibly test the loudspeaker circuits before connecting them to the amplifier.)

## IMPEDANCE METER

### ZM-104A

This portable analogue meter measures loudspeaker impedance (at 1kHz) in three ranges (5-1000, 50-10000 and 500-10000 ohms) with a clear analogue display. To use simply disconnect the speaker line from the amplifier, connect the meter across the line and read the impedance.

- ▶ Battery life approx. 30 hours continuous use (at first range, 60 hours at higher ranges). Supplied complete with carrying case, test leads and impedance power chart.
- ▶ Dimensions: 120 (W) x 220 (D) x 63 (H) mm including case.
- ▶ Weight: less than 1kg including 4 x AA batteries (not supplied).



# PRO SOUND

## M-8080D SERIES DIGITAL MATRIX MIXER SYSTEM

This Digital Matrix Mixer system delivers music, paging and zone management solutions for fixed installed audio applications. Easy to use and cost-effective it offers state-of-the-art signal processing. Projects using DSP platforms usually require a minimum number of inputs and outputs. M-8080D offers a large choice of I/O options making it a good choice for many different applications.



### 8x8 DIGITAL MATRIX MIXER

#### M-8080D

- ▶ 8 analogue IN and 8 analogue OUT.
- ▶ 4 digital IN and 4 digital OUT.
- ▶ DSP functionalities EQ, Compressor, Delay and more.
- ▶ Easy and quick operation.
- ▶ Intuitive GUI via PC.
- ▶ Extended remote controller options.



### DANTE MODULE

#### M-800DT

- ▶ Audio transmission and reception via ethernet.
- ▶ Supports daisy chain or star connection and enables redundant network configuration.
- ▶ Connecting up to 16 x M-8080D Matrix Mixer Systems, with up to 192 inputs and outputs.
- ▶ Ideal for systems with numerous zones/floors such as in large building complexes.
- ▶ Existing ethernet can be used.



### REMOTE AUDIO CONTROL PANEL

#### M-800RC

- ▶ Input/Output signal routing.
- ▶ Volume control.
- ▶ Direct power supply by network cable.
- ▶ LCD screen with output level display.
- ▶ RD port IN, for connection to M-8080D.
- ▶ RD port LINK for daisy chain connection.
- ▶ 100m CAT5e cable length.

### REMOTE AUDIO CONTROL PANEL WITH AUDIO OUT

#### M-802RC

- ▶ Input/Output signal routing.
- ▶ Volume control.
- ▶ Direct power supply by network cable.
- ▶ 2 analogue outputs.
- ▶ LCD screen with output level display.
- ▶ RD port IN, for connection to M-8080D.
- ▶ RD port LINK for daisy chain connection.
- ▶ 100m CAT5e cable length.



## REMOTE AUDIO INPUT OUTPUT PANEL

### M-8221O

- ▶ Built-in A/D and D/A converter.
- ▶ 2 analogue inputs (MIC/ stereo line).
- ▶ 2 analogue outputs.
- ▶ Phantom power.
- ▶ Input sensitivity.
- ▶ Direct power supply by network cable.
- ▶ RD port IN, for connection to M-8080D.
- ▶ 100m CAT5e cable length.



## REMOTE MICROPHONE

### M-800RM

- ▶ Up to 12 different zones.
- ▶ Zone LC display.
- ▶ Zone selector with volume control.
- ▶ Push-to-talk gooseneck microphone.
- ▶ Status and communication indicators.
- ▶ USB port to load chimes sound files.
- ▶ RD port, for connection to M-8080D.
- ▶ 100 m cable length.



## REMOTE AUDIO CONTROL PANEL WITH TOUCH DISPLAY

### M-800RCT

- ▶ Input/Output signal routing.
- ▶ Volume control.
- ▶ Pre-set control.
- ▶ 4.3" touch screen.
- ▶ Direct power supply by network cable.
- ▶ LCD screen with output level display.
- ▶ RD port IN, for connection to M-8080D.
- ▶ RD port LINK for daisy chain connection.
- ▶ 100m CAT5e cable length.



## EXTENSION MODULE 4 PORTS

### M-804EX

- ▶ 1 digital port In (from M-8080D).
- ▶ 1 digital port out for audio plus control.
- ▶ 3 digital port out for control only.
- ▶ 24V DC power supply.



# PRO SOUND

## 9000 SERIES DIGITAL MIXER

An unparalleled DSP mixer for music distribution, multi-zone paging and room combining applications.

### M-9000M2

- ▶ Flexible modular design - up to 8 mic/line inputs and 8 outputs.
- ▶ Detailed GUI software screens make even complex settings intuitive and easy to understand.
- ▶ Any of the 30 EQ presets appropriate to the TOA speakers used may be selected for each output.
- ▶ Up to 16 flush-mount remote panels connectable.
- ▶ Programmed operating system - 32 scene memories and 32 paging memories.
- ▶ Dual Channel Digital Signal Processor (DSP) on input and output channels.
- ▶ 10-band Parametric EQ/ High & Low Pass Filters/ Bass & Treble/ Loudness/ Compressor/ Gate/ Ducker/ NOM (Auto-mix)/ Delay (Output channel only)/TOA Speaker EQ Presets/ DSP included on M-9000M2 Outputs, D-001T, D-001R & T-001T modules.



## PAGING MICROPHONE

### RM-9012C

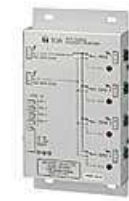


## SPEAKER SELECTORS

### SS-9012



### SS-9001



## SIP MODULE

### SP-11N



## DIVERSITY TUNER MODULE

### WTU-M9800



# 9000 SERIES MODULES

REMOTE PANEL WITH 6 BUTTONS

ZM-9001



REMOTE PANEL WITH 4 BUTTONS/ VOLUME CONTROL

ZM-9002



ASSIGNABLE REMOTE BUTTON PANEL

ZM-9011



ASSIGNABLE VOLUME CONTROL

ZM-9012



ASSIGNABLE REMOTE BUTTON PANEL

ZM-9013



ASSIGNABLE REMOTE BUTTON PANEL

ZM-9014



AMBIENT NOISE SENSING MICROPHONE

AN-9001



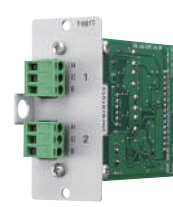
DUAL MIC/LINE INPUT MODULE WITH DSP

D-001T



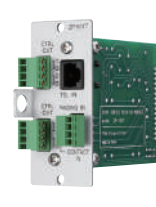
DUAL LINE OUTPUT EXPANSION MODULE WITH DSP

T-001T



TELEPHONE ZONE PAGING MODULE

ZP-001T



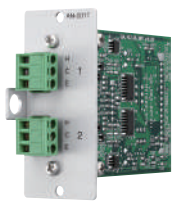
INPUT/OUTPUT CONTROL MODULE

C-001T



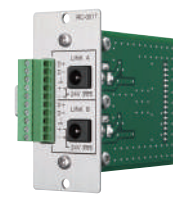
AMBIENT NOISE CONTROL MODULE

AN-001T



REMOTE CONTROL MODULE

RC-001T



LINE INPUT MODULE

D-001R



SOUND MASKING MODULE

NM-01



# PRO SOUND

## D-900 SERIES DIGITAL MIXERS

High quality sound and remote control capability in a compact, modular digital mixer.

### DIGITAL MIXER

#### D-901

- ▶ Fully modular digital mixer featuring 12 inputs, 8 bus and 8 output configuration with easy operation that can be expanded as applications require.
- ▶ Automatic mixing function adjusts input level automatically to make operating easier.
- ▶ Convenient front panel controls and display make it easy to perform all functions and confirm parameter settings without requiring a PC.
- ▶ 16 sound parameter setting configurations can be stored in memory for instant recall when required.
- ▶ Can be externally controlled with an external signal trigger or the RS-232C port on the back which enables the D-901 to easily interface with external equipment.
- ▶ Compressor can be switched in to reduce the dynamic range between the smallest and largest signals preventing amplifier clipping at high levels.



### VCA FADER UNIT

#### D-911

- ▶ Significantly expands the operational scope of the D-901 Digital Mixer.
- ▶ Adds useful control capabilities when connected to the D-984VC.
- ▶ Full VCA operation becomes possible, allowing all the D-901's 12 inputs and 8 outputs channel gain levels and 8 contact controls.





# D-2000 SERIES DIGITAL AUDIO MIXING SYSTEM

Expandable all-in-one design offering easy operation and system control capabilities.

## PROCESSOR UNIT

### D-2008SP

- ▶ 32 preset memories for user convenience.
- ▶ Up to 32 different routing and parameter configurations can be stored for frequent changes in staging, seating and speaker arrangements.
- ▶ Intuitive GUI.
- ▶ Mixing console option offers easy user operation.
- ▶ User-friendly VCA control.



## DIGITAL MIXING CONSOLE

### D-2012C

- ▶ Mixing console offers easy user operation.
- ▶ The digital mixing processor D-2008SP can be connected via network.
- ▶ 12 motorized faders and 8 rotary encoders.
- ▶ Access to up to 80 channels.
- ▶ Simplified mixing operation that suit nonprofessional users.
- ▶ Monitoring of input and output channel signal levels.
- ▶ Recalling preset memory settings.
- ▶ Contact control.



# PRO SOUND

## D-901/D-2000 SERIES MODULES

### MIC/LINE INPUT MODULES

#### D-921E



- ▶ 24-bit Removeable Terminal Block Connector

#### D-921F



- ▶ 24-bit XLR Connector

#### D-922E



- ▶ 20-bit Removeable Terminal Block Connector

#### D-922F



- ▶ 20-bit XLR Connector

### MIC/LINE INPUT MODULES

#### D-936R



- ▶ Stereo Type

#### D-2000AD1



- ▶ 4 Channel XLR Connector for D-2000 Series only.

### DIGITAL INPUT MODULES

#### D-923AE



- ▶ Applicable AES/EBU Format

#### D-937SP



- ▶ Applicable S/PDIF Format

### LINE OUTPUT MODULES

#### D-971E



- ▶ Removeable Terminal Block Connector

#### D-971M



- ▶ XLR Connector

#### D-971R



- ▶ RCA Pin Jack Connector

#### D-2000DA1



- ▶ 4 Channel XLR Connector for D-2000 Series Only

### DIGITAL OUTPUT MODULES

#### D-961SP



- ▶ Applicable S/PDIF Format

#### D-972AE



- ▶ Applicable AES/EBU Format

### REMOTE CONTROL MODULES

#### D-981



- ▶ 8 Inputs/8 Outputs

#### D-983



- ▶ 24 Inputs, 16 Outputs

### VCA MODULE

#### D-984VC



- ▶ VCA Control + 8 Inputs, 8 Outputs

### COBRANET INTERFACE MODULE

#### D-2000CB



- ▶ Allows audio transmission among D-2008SPS

# DIGITAL MIXERS

The digital mixer range provides professional sound solutions for many applications.

## M-633D

- ▶ 6 mono and 3 stereo input channels and 2 mono and 2 stereo output channel.
- ▶ 1 Stereo input is located on the front panel for easy connection of audio/MP3 players.
- ▶ Provides automatic audio adjustment with push-button ease with no need for complex PC settings.
- ▶ Automatic Resonance Control function, a Feedback Suppression Function, Automatic Mute Function and an Automatic Clippguard Function for enhanced sound intelligibility.
- ▶ Compact 1U size.



## M-864D

- ▶ Stereo mixer with 22 input channels including 8 monaural input channels and 7 stereo input channels.
- ▶ 6 output channels including 4 monaural output channels and 1 stereo recording output channel and 4 bus channels.
- ▶ Automatic Resonance Control (ARC) measurement and processing algorithm that optimizes speech and sound clarity for individual acoustic environments.
- ▶ Automatic stereo input mute (Auto Mute or Ducker) function that mutes stereo input automatically when detecting a monaural control signal.
- ▶ Dedicated GUI software facilitating higher precision parameter setting adjustment on PC via Ethernet LA.
- ▶ Finer speaker setting possible when used in combination with optional Digital Speaker Processor DP-SP3.



## SO-MIXT-24V

- ▶ Microphone and line level input.
- ▶ Two inputs, one output.
- ▶ XLR connector (balanced output) microphone input.
- ▶ Individual volume control with joint bass and treble control.
- ▶ Automatic mix with selectable Talkover function. 30dB, Talkover time: 3 seconds.



# PRO SOUND

## DIGITAL MATRIX MIXER AMPLIFIER

Providing an all-in-one solution for multi-channel or multi-zone applications for general/emergency announcements and background music.

### M-725F

- ▶ All-in-one solution for multi-channel or multi-zone applications.
- ▶ 6 x 4 audio matrix, DSP and 4ch Class-D amplifier in one chassis.
- ▶ 4 independent line inputs, 2 MIC/LINE priority inputs.
- ▶ Each output with independent DSP preset adjustment with input source matrix selection.
- ▶ Ideal for restaurants, coffee shops, pubs, retail stores, schools, offices etc.
- ▶ High power (250W x 4 at 70 V/100 V).



### WP-700

- ▶ Wall remote control panel for M-700 Series Digital Matrix Mixer.
- ▶ Designed to remotely control MA-725F (or MM-700F) Matrix Mixer amplifiers.
- ▶ Select input source and adjust volume level of connected output.
- ▶ Up to 4 units can be connected to one MA-725F/MM-700F unit (1 WP-700 per each output channel).
- ▶ Single CAT5/5e/6 STP cable is required for each connection (max 300 feet).
- ▶ Can be mounted in a 1-gang standard electrical box.





# DIGITAL MIXER AMPLIFIER DESIGNED SPECIFICALLY FOR MOSQUES

Providing an all-in-one solution for multi-channel or multi-zone applications for general/emergency announcements and background music.

## MX-6224D

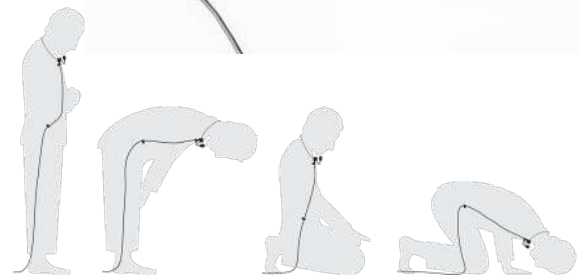
- ▶ Dual 240W digital amplifier.
- ▶ 6 microphone inputs, 2 AUX input.
- ▶ Independent input and output volume controls.
- ▶ Tone controls (bass, middle and treble).
- ▶ Speaker EQ for BS-1030 and TC-631M
- ▶ Remote control connection with the RC-03 remote control panel.
- ▶ Suitable for small to medium sized House of Worship applications.



## EM-362

The EM-362, neck-worn microphone is designed specially for mosque (Imam) use during prayer. Its unique design suspends the microphone in front of the speaker's mouth optimizing speech pick up and avoiding being brushed against by the movement of body during prayer creating unnecessary noise.

- ▶ Microphone positioning made easy with the flexible shaft.
- ▶ High sensitivity and wide-range frequency response ensure sound clarity whether user is standing or in praying position.
- ▶ Microphone has the option to operate either with 2 x "AAA" battery or phantom power.
- ▶ There is an ON/OFF switch allowing user to switch on and off the microphone when needed.



# PRO SOUND

## DIGITAL POWER AMPLIFIERS

Advanced Class D amplification with highly efficient AC mains to output power ratings for complete technological superiority and performance efficiency.

### DUAL CHANNEL POWER AMPLIFIERS

#### DA-1250D-EB

- ▶ Dual Channel Digital Power Amplifier.
- ▶ High power - total output of 2500 W (4Ω) in a 2U cabinet.
- ▶ Selectable connection cases - Bridge mode/Parallel mode/Stereo mode.
- ▶ Bridgeable for 1-channel operation.



#### DA-250D

- ▶ 2x 250 W rated output.
- ▶ 4 Ω speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85% efficient.
- ▶ For 19" cabinet rack mounting with 1 U height.
- ▶ Independent power supply for each channel.
- ▶ Selectable bridge operation.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.
- ▶ Comprehensive protection circuitry.
- ▶ Removable dust filters for easy cleaning.



#### DA-250DH

- ▶ 2x 250 W rated output.
- ▶ 100 V speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85% efficient.
- ▶ For 19" cabinet rack mounting with 1 U height.
- ▶ Independent power supply for each channel.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.
- ▶ Comprehensive protection circuitry.
- ▶ Removable dust filters for easy cleaning.



### 4-CHANNEL POWER AMPLIFIERS

#### DA-250F

- ▶ 4x 250 W rated output.
- ▶ 4 Ω speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85% efficient.
- ▶ For 19" cabinet rack mounting with 1 U height.
- ▶ Independent power supply for each channel.
- ▶ Selectable bridge operation.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.



#### DA-250FH

- ▶ 4x 250 W rated output.
- ▶ 100 V speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85% efficient.
- ▶ For 19" cabinet rack mounting with 1 U height.
- ▶ Independent power supply for each channel.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.
- ▶ Comprehensive protection circuitry.
- ▶ Removable dust filters for easy cleaning.



## 4-CHANNEL POWER AMPLIFIERS

### DA-500FH

- ▶ 4 x 500 W rated output.
- ▶ 100 V speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85% efficient.
- ▶ For 19" cabinet rack mounting with 2 U height.
- ▶ Independent power supply for each channel.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.
- ▶ Comprehensive protection circuitry.
- ▶ Status output (power, protection) and power on/off control per channel.
- ▶ Removable dust filters for easy cleaning.



### DA-550F

- ▶ 4x 550 W rated output.
- ▶ 4 Ω speaker outputs.
- ▶ Light weight and compact.
- ▶ Class D design 85 % efficient.
- ▶ For 19" cabinet rack mounting with 2 U height.
- ▶ Independent power supply for each channel.
- ▶ Selectable bridge operation.
- ▶ Forced-air cooling system.
- ▶ Low heat dissipation.
- ▶ Comprehensive protection circuitry.
- ▶ Status output (power, protection) and power on/off control per channel.
- ▶ Removable dust filters for easy cleaning.



## MATCHING TRANSFORMER

### MT-251H

- ▶ Designed for use with the DA-250DH, DA-250FH, DA-500F-HL and DA-500FH Multi-Channel Power Amplifiers, the MT-251H electrically isolates the high-impedance speaker lines from the amplifier.
- ▶ Dedicated to DA Amplifiers with 100 V speaker outputs.
- ▶ Electrical Isolation for high-impedance speaker.



## DIGITAL PROCESSOR

### DP-SP3

- ▶ Enhanced sound-space creation.
- ▶ 24-bit, 96kHz sampling for clear, high-quality and realistic sound, with a full sense of presence.
- ▶ 10 filters on each input and 12 filters on each output. Any combinations of parametric equalizer and high/low pass, and high/low shelving filters, as well all-pass, notch filters and CD horn equalizer are all possible.
- ▶ 2 inputs and 6 outputs, and processor can work with a 3-way multi-amp system.
- ▶ Setting and operation via a LAN on a PC with installation of the provided intuitive control/ operation software.
- ▶ Pre-set memory for up to 16 different setting patterns, for instant recall of patterns best suited to a particular venue.
- ▶ Flexible remote-control operation: 4 contact input terminals, for memory recall, output volume control, and output muting. Switching of pre-set parameter patterns, speaker EQ pattern selection, and matrix selection by a web browser via Ethernet.
- ▶ 2-way linkage with M-864D digital mixer's pre-set switching possible.
- ▶ Setting of input sensitivity with input PAD switch.
- ▶ Analogue output attenuator.



## MULTI CHANNEL MONITOR

### MP-1216

- ▶ Multi-channel monitor.
- ▶ Allows visual and aural monitoring.
- ▶ 2 units can be linked for up to 32 channels (with optional cable YA-8: 1 master monitor unit).
- ▶ 12-segment LED meter with calibrated scale for each input.
- ▶ Audio monitoring of each channel through a built-in selector switch and loudspeaker.
- ▶ All inputs balanced and transformer isolated.



# DISTRIBUTION

Music adds ambience to everyday activities and special occasions but is often the unseen element that is simply there in the background. TOA technology enables leisure facilities such as restaurants, retail outlets and hotels to add to the atmosphere to enhance their clients experiences adding fantastic sound for these applications.

## DYNAMIC UNIDIRECTIONAL MICROPHONES

Our dynamic unidirectional microphones are ideal for voice/speech featuring:

- ▶ Rigid die-cast aluminium microphone body.
- ▶ Switching and handling noise suppression.
- ▶ Microphone holder provided as standard accessory.

### DM-1100

- ▶ 7.5m phone plug cable supplied with unit.



### DM-1200

- ▶ 10m phone plug cable supplied with unit.
- ▶ Balanced output for long distance connection.



### DM-1300

- ▶ 10m phone plug cable supplied with unit.
- ▶ Balanced output for long distance connection.



### DM-1500

- ▶ Short type slide on/off switch reduces handling noise.
- ▶ XLR connector (balanced) and 10m cable with phone plug.
- ▶ Adapter for stand mount provided.



## DYNAMIC FIXED LO-Z GOOSENECK MICROPHONES

- ▶ Flexible and durable goosenecks microphones suitable for lecture desks or paging.
- ▶ Suppresses handling noise.
- ▶ 600Ω Impedance (balanced).
- ▶ 3-pin connector.

### DM-524S

- ▶ With built-in on/offswitch



### DM-524B



### ST-73A Stand



# CONDENSER MICROPHONES

Ideal for delivering speech for events, conferences, lectures and paging.

## LAVALIER MICROPHONE

### EM-410

- ▶ Electret condenser microphone element for voice orientated applications such as lectures, presentations and religious services.
- ▶ Designed for best performance when attached to the chest area.
- ▶ Capsule rotates 360 degrees for optimal pickup even when worn on a lapel.



## GOOSENECK MICROPHONE

### EM-800

- ▶ Electret condenser microphone for such speech applications as meetings, lectures and religious services.
- ▶ Excellent high-frequency response of 60Hz - 20kHz delivers clear output.
- ▶ High sensitivity (-35dB) provides a satisfying tonal response.
- ▶ Gooseneck with two adjustment points allows more flexible microphone positioning angles.
- ▶ Rejection of undesirable off-axis sound minimizes possible feedback.



## FLUSH-MOUNT BOUNDARY MICROPHONE

### EM-600

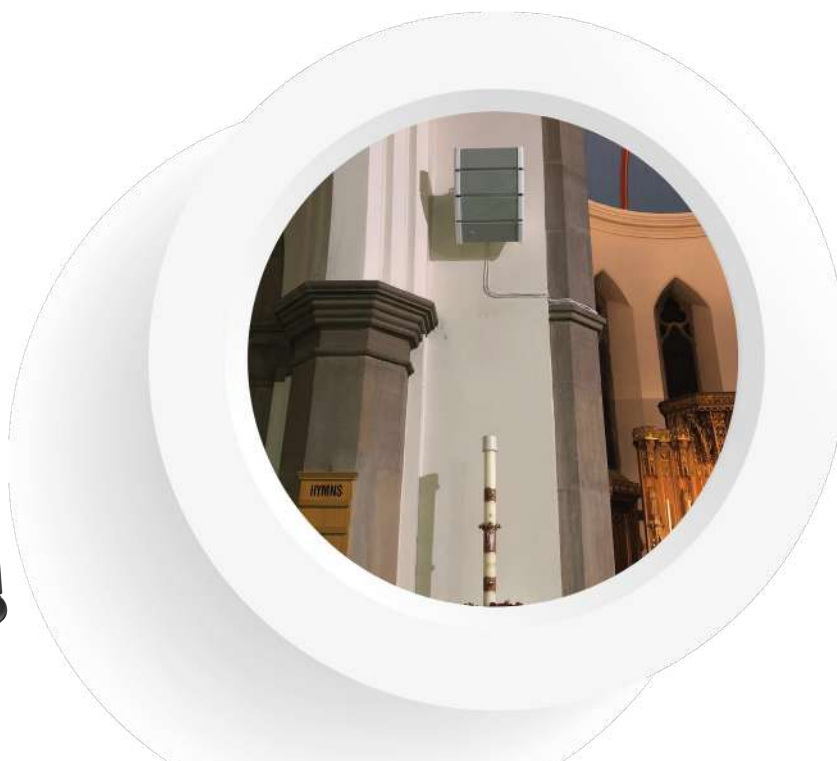
- ▶ Electret condenser microphone for conference room recording and secure monitoring.
- ▶ Wide frequency range (30Hz - 20kHz) provides well-balanced sound with clarity and a satisfying tonal response.
- ▶ Unobtrusive design allows easy flush-mounting in walls, ceilings and desktops.
- ▶ Optimised to deliver best performance when used on a desk or attached to a ceiling.
- ▶ A 50Hz low-cut filter reduces intrusive noise, such as air conditioner rumble or door opening/closing.
- ▶ Two rubber isolation rings provided as an accessory serving to reduce vibration.



## MICROPHONE STAND

### ST-800

- ▶ For EM-800





# DISTRIBUTION

## PAGING MICROPHONES

Designed for paging calls and general announcements:

### PM-660

- ▶ Dynamic paging microphone with phone jack.
- ▶ Large talk switch with locking lever.
- ▶ Fitted with 2.5m, 1-core shielded cable.



### PM-660D

- ▶ Dynamic paging microphone with DIN connector.
- ▶ Large talk switch with locking lever.
- ▶ Extra switch contact for mute or relay control.
- ▶ Fitted with 2.5m, 2-core shielded cable and DIN plug.



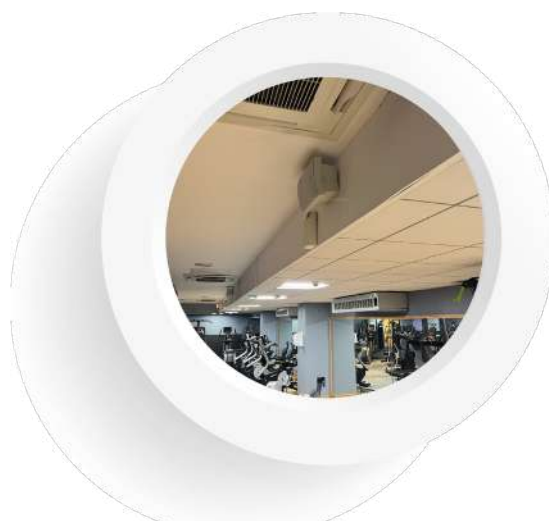
### PM-660U

- ▶ Dynamic paging microphone without plug.
- ▶ Large talk switch with locking lever.
- ▶ Extra switch contact for mute or relay control.
- ▶ Fitted with 2.5m, 2-core shielded cable without plug.



### RM-9012C

- ▶ Unidirectional electret condenser microphone with balanced audio output.
- ▶ An all-call button for selecting all zones.
- ▶ Clear button for clearing all zone selections.
- ▶ Announcement to the selected zones out of a maximum of 12 zones.
- ▶ 1-tone chime function with switch setting.
- ▶ Microphones volume control.
- ▶ LED indicator for each selector.
- ▶ RJ45 connector.



# AMPLIFIER CONTROL UNITS

## RU-2001/RU-2002

- ▶ Amplifier control unit for 5 pin DIN plug remote switch type paging microphone (PM-660D).
- ▶ Desktop or wall mounting.
- ▶ Outputs remote control signals for main amplifier power ON/OFF, and for initiating all-call paging.
- ▶ Microphone volume control and talk ON indicator.
- ▶ Power supplied by locally available AC adaptor .
- ▶ RU-2002: Activates selectable 4-tone, 2-tone and single tone chimes, plus gong, when paging remote microphone's talk switch is pressed.



# GOOSENECK MICROPHONES

## EM-380

- ▶ 500 mm microphone with stable base.
- ▶ Power option selectable (battery or phantom).
- ▶ Blue LED indicator.
- ▶ On / off switch for hands-free operation during speech.

## WITH CHIME

## EC-380

- ▶ 500 mm microphone with stable base.
- ▶ Power option selectable (battery or power supply).
- ▶ Blue LED indicator.
- ▶ On/off switch for hands-free operation during speech.



# DISTRIBUTION

## A-2000DD SERIES DIGITAL MIXER AMPLIFIERS

A series of high-performance mixer power amplifiers suited for broadcasting paging or background music in houses of worship, schools, offices, shops and factories. Equipped with balanced microphone inputs for better isolation from external noise, compared to unbalanced inputs, the A-2000D Series is suitable for AC operation and comes with power outputs from 30 W to 240 W. It is finished with a scratch and fingerprint-resistant surface for easy handling as well as quick volume control with master volume knob.

- ▶ 3 microphone inputs, 2 AUX input and 1 recording output.
- ▶ 2 phone jacks and 1 5-pin DIN input.
- ▶ Speaker output of constant voltage distribution system (100 V).
- ▶ Independent tone control of boost and cut type for both high and low frequency.
- ▶ MIC 1 with phantom power and mute function.
- ▶ Current limiter to prevent damage due to current overload.
- ▶ Excess heat limit to protect the transistor and power transformer.
- ▶ 70 % less weight.
- ▶ Up to 80 % power savings.



## A-3200D SERIES DIGITAL MIXER AMPLIFIERS

The A-3200D Series of digital mixer amplifiers offer a high performance and cost-effective solution for offices, educational facilities, restaurants, retail and houses of worship. With a wide range of different models that include MP3 players, radio, Bluetooth™, zone selection and equalizer this versatile amplifier can provide audio for messaging, announcements and background music.

- ▶ Dual impedance.
- ▶ 5 inputs, 2 AUX, 1 REC.
- ▶ Priority Control Input.

### DIGITAL MIXER AMPLIFIER WITH 5 ZONES

A-3212DZ 120 W

A-3224DZ 240 W

A-3248DZ 480 W



### DIGITAL MIXER AMPLIFIER WITH MP3 AND BLUETOOTH™

A-3212DM 120 W

A-3224DM 240 W

A-3248DM 480 W



### DIGITAL MIXER AMPLIFIER WITH MP3, BLUETOOTH™ AND ZONES

A-3212DMZ 120 W

A-3224DMZ 240 W

A-3248DMZ 480 W



### DIGITAL MIXER AMPLIFIER WITH MP3, BLUETOOTH™ AND EQ

A-3212DME 120 W



### DIGITAL BOOSTER AMPLIFIER

P-3248D 480 W



# DISTRIBUTION

## A-3500D SERIES DIGITAL MIXER AMPLIFIERS

These 2 zone Class D amplifiers provide high quality background music, paging and broadcasting.

- ▶ 5 audio inputs they are ideal for emergency and priority broadcasting via control input.
- ▶ Available as 60W, 120W, 240W and 480W.
- ▶ With high and low impedance switchable speaker outputs 8  $\Omega$  and 10V.



## A-3600D SERIES DIGITAL MIXER AMPLIFIERS

These amplifiers providing maximum flexibility and are suitable for broadcasting, paging or background music in retail shops, supermarkets, educational facilities, offices, houses of worship and factories.

- ▶ 7 audio inputs.
- ▶ Browser based control and monitoring from anywhere reduces time troubleshooting and adjusting systems.
- ▶ Available as 60W, 120W, 240W and 480W.
- ▶ Zone selector for 2 zones.
- ▶ High and low impedance.
- ▶ Broadcasting priority and emergency paging via control input.



**MB-25B**

- ▶ Rack mount bracket for A-2000DD, A-3200D, A-3500D and A-3600D Series of amplifiers.





## A-5000 SERIES DIGITAL MIXER AMPLIFIERS

Music is an essential component for creating ambience and atmosphere. The A-5000 Series is available in both 60W and 120W models and provides the ideal solution for restaurants and retail outlets.



## VM-2000 SERIES SYSTEM AMPLIFIERS

Multi-functional amplifiers that can be rack mounted. Suitable for general-purpose broadcast and emergency announcements.



- ▶ Programmable system management amplifier.
- ▶ 5 switchable high impedance speaker zones with adjustable attenuators.
- ▶ 9 units can be combined to increase the output power and number of zones (Up to 45 zones).
- ▶ 4 input channels come with volume and bass/treble control on the front panel.
- ▶ Both BGM inputs with level pre-adjustment.
- ▶ The routing to the zones of the 3 microphone/line level inputs and the telephone paging input can be pre-set.
- ▶ Additional features: Emergency power input, remote power control, 7 built-in chimes etc.
- ▶ 19" rack mountable (3 units, optional MB-36 brackets required).
- ▶ EN 60849 certified.

### VM-200 SERIES ACCESSORIES

EV-200M



- ▶ Voice Announcement Board

SV-200MA



- ▶ Surveillance Board

RM-200MS



- ▶ Remote Microphone

RM-210S



- ▶ Remote Microphone Extension Unit

MB-36



- ▶ Rack Mount Bracket

WB-RM200



- ▶ Mounting-Bracket for RM-200

# DISTRIBUTION

## A-230 PACKAGE AMPLIFIER

Cost effective, compact and lightweight package amplifier suitable for paging and background music distribution.



## DIGITAL MESSAGE REPEATERS

### SOUND REPEATER

#### EV-20R



- ▶ For supermarkets and department stores with a distributed speaker system.
- ▶ Up to 4 separate message selections or announcements to a total maximum of six minutes can be recorded.
- ▶ Front panel-mounted recording inputs (mic/line switchable).
- ▶ PC connection via USB. A CD-ROM with various chimes is included.
- ▶ Pre-recorded message can be transferred via USB-interface.
- ▶ Built-in interval timer allows messages to be repeated at various time intervals (0.5 seconds up to ∞).
- ▶ 3W / 8Ω amplifier section built-in for direct speaker connection. Volume control for level adjustment of an external source.
- ▶ A line input and output for connecting various program sources including CD players or dedicated BGM inputs.

### ACCESSORIES

#### MB-WT3

- ▶ Rack Mount Bracket



### DIGITAL ANNOUNCER

#### EV-700



- ▶ Network connection.
- ▶ Recorded sentences can be combined and played back as a program.
- ▶ Up to 256 programs can be played back, up to 32768 phrases can be recorded.
- ▶ Pre-announcement gong and chime possible.
- ▶ Emergency messages (pre-recorded) can override current programs.
- ▶ Recording, playback, erasure, and stop can be remotely controlled by external equipment.
- ▶ Maximum recording time about 3 hours (at 44.1kHz sampling rate) or about 4 hours (at 32kHz sampling rate).

## CAR AMPLIFIERS

Mobile amplifiers designed for vehicle use. Available outputs of 15, 30 and 60 W with 2 MIC inputs and AUX input for CD player, radio etc. Unidirectional dynamic microphone with DIN size, easy in-dash installation.



# AUDIO PLAYER

## MD-210 CTU-EB



A 1U 19" rack size all-in-one player, is capable of playing various audio sources, such as CD, USB, SD/MMC Card and FM Radio. In CD mode, CD or USB or SD/MMC Card can be selected to play the audio source, while Tuner mode plays FM Radio. The FM radio tuner is able to store up to 30 channels in pre-set memory. Sleep function of up to 90min is available in Tuner mode.

# MEGAPHONES

TOA invented the megaphone in 1934 to provide a way of communicating clear messages. With highly durable construction they have a wide frequency range for enhanced audio quality. Compact and lightweight with long-lasting battery life and neodymium magnets for high audio performance.

## SPLASHPROOF HAND GRIP TYPE MEGAPHONES

### ER-1203



- ▶ 4W max
- ▶ IP5\*

### ER-1206



- ▶ 10W max
- ▶ IP5\*

### ER-1206W



- ▶ 10W max
- ▶ IP5\*
- ▶ With whistle

### ER-1206S



- ▶ 10W max
- ▶ IP5\*
- ▶ With siren

### SP-1100



- ▶ Wall mount bracket for models:
- ▶ ER-1203
- ▶ ER-1206
- ▶ ER-1206S
- ▶ ER-1206W

\*Protected against water jets by a nozzle against the enclosure from any direction

## HAND GRIP TYPE MEGAPHONES

### ER-520



- ▶ 10W max

### ER-520W



- ▶ 10W max
- ▶ With whistle

### ER-520S



- ▶ 10W max
- ▶ With siren

### ER-1215



- ▶ 23W max

### ER-1215S



- ▶ 23W max
- ▶ With Siren

### ER-3215



- ▶ 23W max

## SHOULDER TYPE MEGAPHONES

### ER-2215



- ▶ 23W max

### ER-2215W



- ▶ 23W max
- ▶ With whistle

### ER-2230W



- ▶ 45W
- ▶ With whistle

### ER-2930W



- ▶ 45W max
- ▶ With whistle
- ▶ Wireless function

# WIRELESS SYSTEMS

## LICENSING

If you are intending to use a wireless microphone system in the UK, you will need to understand whether it is license free - Channel 70 or whether you require a UK Wireless Microphone License – Channel 38. PMSE's (Programme-making and special events licenses) are required by law if being used at a performance or event when using a Channel 38 system. You can apply for an annual or bi-annual license via OFCOM's PSME department or online. There are different fees and guidelines for fixed site locations using co-ordinated frequencies.

For license costs and further information on what Channel suits your requirements visit their website: [www.ofcom.org.uk](http://www.ofcom.org.uk)

## UNDERSTANDING FREQUENCIES

- ▶ Channel 70 863-865MHz is the license free option that can be used for up to 4 channels.
- ▶ Channel 38 606-614Mhz is the licensed frequency which now includes Channel 65.
- ▶ Channel 39 – 614-790MHZ provides limited frequencies in certain locations and does require a license.
- ▶ Channel 61-69 790-862MHZ have been restricted frequencies since 2013 and, if used, can lead to a fine or imprisonment. (except Channel 65).

## UNDERSTANDING OUR WIRELESS PRODUCTS

Within our product range we have wireless systems that are either Channel 38 (G Band) or Channel 70 (D Band) or both, so it is important to understand the difference. Channel 70 only allows up to 4 channel use. For example, the Trantec S4.10 Series can be supplied in both Channel 70 and Channel 38, but you can only have a maximum of 4 channels on Channel 70. Therefore, if purchasing a rack 'n' ready in this system, if you wish to use Channel 70, the maximum system you could have is a 4 way. Channel 38 allows for a greater number of simultaneous channels to be used. Each of our product ranges offer different amounts of channels to suit the size of the application it is intended for.

Our price list product codes reflect which frequency the series can be used with. You can identify this as follows:

Product Codes that have a D in the last three digits, for example

S4.10-RXA-EB-GD4, are Channel 70. Products that have a G is in the last three digits, for example S4.10-RXA-EB-GG4, are Channel 38.

View the full frequency tables in the technical section.

# 5000 SERIES 16 CHANNEL SOLUTION

## SYSTEMS



### WS-5225

WT-5810 Receiver + WM-5225 Handheld Microphone Set.

### WS-5265

WT-5810 Receiver + WM-5265 Handheld Microphone Set.

### WS-5325U

WT-5810 Receiver + WM-5325 Beltpack + YP-M5300 Lavalier Microphone Set.

### WS-5325M

WT-5810 Receiver + WM-5325 Beltpack Microphone Set.

### WS-5325H

WT-5810 Receiver + WM-5325 Beltpack + WH-400H Headworn Microphone Set.

## RECEIVERS

### WT-5800

- ▶ Automatic frequency scan.
- ▶ Integrated squelch function.
- ▶ Ideally suited for fixed installations such as in event locations, multi-purpose and sports halls, plenary and conference venues, churches, auditoriums etc.
- ▶ System always select the stronger of the two antenna signals for further processing.
- ▶ Set up with up to 16 simultaneously operating receivers possible.
- ▶ Two antenna distribution outputs allow to simply loop through the antenna signals.



### WT-5805

- ▶ Automatic frequency scan.
- ▶ Integrated squelch function.
- ▶ Ideally suited for fixed installations such as in event locations, multi-purpose and sports halls, plenary and conference venues, churches, auditoriums etc.
- ▶ System always select the stronger of the two antenna signals for further processing.
- ▶ Set up with up to 16 simultaneously operating receivers possible.



### WT-5810

- ▶ Diversity operation.
- ▶ Automatic frequency scan.
- ▶ Additional audio mixing input.
- ▶ Adjustable triple-squelch.
- ▶ Battery status indicator.
- ▶ Provides 16 intermodulation-free frequencies.
- ▶ Allows simultaneous operation for up to 16 WT-5810 units without running the risk of interferences.
- ▶ Battery status LED, channel display, AF peak LED, antenna A/B-LED



## HANDHELD MICROPHONE

### WM-5225

- ▶ Condenser microphone with high quality electret condenser capsule, high sensitivity and excellent sound quality.
- ▶ Slim and lightweight.
- ▶ Comes with an indispensable on/off switch, which at the same time acts as a rolling stopper
- ▶ With a maximum SPL of 126 dB SPL.



## HANDHELD MICROPHONE

### WM-5265

- ▶ High quality dynamic handheld microphone with a hyper-cardioid pickup pattern.
- ▶ Slim and lightweight.
- ▶ Comes with an indispensable on/off switch, which at the same time acts as a rolling stopper.
- ▶ Extremely high maximum sound pressure level makes it suitable for speech as well as vocal applications.



## HANDHELD MICROPHONE

### WT-5270

- ▶ Dynamic vocal microphone with a cardioid pickup pattern with excellent sound characteristics.
- ▶ Robust construction and well-balanced weight.
- ▶ On/off-switch is located at the bottom of the microphone body to protect accidentally activation during a live performance.
- ▶ Highly immune to handling noise and feedback,



## BELTPACK TRANSMITTER

### WM-5325

- ▶ UHF bodypack transmitter with excellent range and durability.
- ▶ Compact and ultra-lightweight.
- ▶ Equipped with belt clip and a length-adjustable neck strap.
- ▶ Specially developed for speech applications.





# WIRELESS SYSTEMS

## OPTIONAL MICROPHONES

### LAVALIER

#### YP-M5300

- ▶ Unidirectional electret condenser microphone element.
- ▶ Connector for ø3.5 mini-plug.



### LAVALIER

#### YP-M5310

- ▶ Omnidirectional electret condenser microphone element.
- ▶ Connector for ø3.5 mini-plug.



### HEADWORN

#### WH-4000A

- ▶ Unidirectional electret condenser microphone.



### HEADWORN

#### WH-4000H

- ▶ Unidirectional electret condenser microphone.
- ▶ Ideal for sports applications.



### EARWORN

#### YP-M5000E

- ▶ Omnidirectional electret condenser microphone.



### HEADWORN

#### YP-M5000H

- ▶ Omnidirectional electret condenser microphone.



### ACCESSORIES

#### WD-5800

- ▶ Antenna Distributor



#### YW-4500

- ▶ Wall Mount Antenna



#### BC-5000-2

- ▶ Battery Charger



#### BC-5000-6

- ▶ Battery Charger



#### BC-5000-12

- ▶ Battery Charger



#### WB-2000-2

- ▶ Rechargeable Batteries



#### AD-5000-2

- ▶ Charger AC Adapter



#### MB-15B

- ▶ Rack Mount Bracket



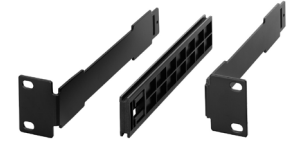
#### MB-WT3

- ▶ Rack Mount Bracket



#### MB-WT4

- ▶ Rack Mount Bracket



#### WH-4000P

- ▶ Waist Pouch



#### WH-4000S

- ▶ Windscreen



# D-5000 SERIES DIGITAL WIRELESS SYSTEM

Giving unprecedented speech clarity for delivering voice to audiences in any speaking scenario. A wireless solution for clarity of audio for classrooms, offices, function rooms and courtrooms.

## DIGITAL WIRELESS RECEIVER

### WT-D5800

- ▶ Frequency channel scan.
- ▶ Feedback suppressing.
- ▶ Built-in optimized preset equalization in microphones.
- ▶ Detachable antenna.
- ▶ Audio mixing with cascading voice input connectivity.
- ▶ Antenna mixing with cascading antenna connectivity.
- ▶ Intuitive LCD display.



## DIGITAL WIRELESS HANDHELD MICROPHONE

### WM-D5200

- ▶ Lightweight body
- ▶ 1 AA battery provides up to 8 hours of continuous use
- ▶ Selectable microphone sensitivity
- ▶ Selectable transmission output (1 mW/10 mW)
- ▶ 3-step battery life indicator
- ▶ Built-in antenna



## DIGITAL WIRELESS BELTPACK TRANSMITTER

### WM-D5300

- ▶ Ultra slim and lightweight body.
- ▶ 1 AA battery provides up to 8 hours of continuous use.
- ▶ Selectable microphone sensitivity.
- ▶ Selectable transmission output (1 mW/10 mW).
- ▶ 3-step battery life indicator.



## OPTIONAL MICROPHONES

### LAVALIER

#### YP-M5300

- ▶ Unidirectional electret condenser microphone element.
- ▶ Connector for ø3.5 mini-plug.



### LAVALIER

#### YP-M5310

- ▶ Omnidirectional electret condenser microphone element.
- ▶ Connector for ø3.5 mini-plug.



### HEADWORN

#### YP-M5000H

- ▶ Omnidirectional electret condenser microphone.



### HEADWORN

#### WH-4000A

- ▶ Unidirectional electret condenser microphone.



### HEADWORN

#### WH-4000H

- ▶ Unidirectional electret condenser microphone.
- ▶ Ideal for sports applications



## ACCESSORIES

### WD-5800

- ▶ Antenna Distributor



### YW-4500

- ▶ Antenna for Wall/Ceiling Mounting



### BC-2000

- ▶ Battery Charger



### WB-2000-2

- ▶ Rechargeable Batteries



# WIRELESS SYSTEMS



Trantec is recognized across the entertainment industry as a leading brand of high-quality specialist wireless microphone systems widely used for vocal performances.

Now part of the TOA Corporation family, Trantec continues to maintain its market leading brand position. The wide product range, including the custom-built rack 'n' ready systems, ensures that we can cater for the most challenging audio demands within the broadcast, film, music, school, house of worship and theatre industries.

## S5.5 SERIES 24 CHANNEL WIRELESS SYSTEMS

### RACK 'N' READY



#### FEATURES

- ▶ Up to 24 simultaneous channels of true diversity operation.
- ▶ USB based computer monitoring.
- ▶ Handheld transmitters with removeable capsules - dynamic, condenser or 3rd party.
- ▶ RF link out for cascading receivers (racks up to 8-way with no ADU).
- ▶ Monitoring software compatible with Windows versions 7,8,10.
- ▶ RF Walk Test added to Software Ver1.6
- ▶ Simple programming of transmitters via infra-red.
- ▶ Credit card sized beltpack transmitters.
- ▶ Single AA transmitter battery life of approx. 10 hours.
- ▶ Professional metal enclosure on both transmitters and receivers.
- ▶ All black fascia designs with distinctive colour backlit indicators.

#### ASSEMBLED PACKAGE:

- ▶ 4, 6, 8, 10 or 12 receivers.
- ▶ Antenna distribution unit.
- ▶ Power supply.
- ▶ Rack mounting trays.
- ▶ 2 x antennae.
- ▶ 19" professional flight case.

#### OPTIONAL REMOTE ANTENNA KIT:

- ▶ 2 x 10m antenna cables.
- ▶ 2 x antenna head amplifiers.
- ▶ 2 x antenna stands.

## RECEIVER

### S5.5-RX

- ▶ Up to 1400 selectable frequencies.
- ▶ USB based computer control and monitoring for all aspects of performance.
- ▶ Simple programming of transmitter with built-in Infra-red data link.
- ▶ Clear and intuitive LCD displays.
- ▶ EQ and phase reversal.
- ▶ RF Walk Test added to Software Ver1.6.
- ▶ RF link out for cascading receivers (racks up to 8-way with no ADU).
- ▶ Monitoring software compatible with Windows versions 7,8,10.



## HANDHELD TRANSMITTER

### S5.5-HDX

### S5.5-HCX

- ▶ Simple programming of transmitter with built-in infra-red data link.
- ▶ Frequency and Power lock facility.
- ▶ Single AA transmitter battery life of approx 10 hours.
- ▶ Integral antenna.
- ▶ Clear and intuitive LCD display .
- ▶ Colour coded ID Band.
- ▶ Professional metal enclosure.
- ▶ Replaceable Dynamic (HDX) or Condenser (HCX) capsule.



## BELTPACK TRANSMITTER

### S5.5-BTX

- ▶ Credit card sized beltpack.
- ▶ Simple programming of transmitter with built in infrared data link.
- ▶ Frequency and power lock facility.
- ▶ Single AA battery life of approx 10 hours.
- ▶ Detachable antenna.
- ▶ Clear and intuitive LCD display.
- ▶ Professional metal enclosure.



# WIRELESS SYSTEMS

## S4.10 SERIES 16 CHANNEL WIRELESS SYSTEMS

The S4.10 Series is designed to make multi-channel wireless as simple as possible. It can be used with a wide range of microphones, or musical instruments, making it the perfect solution for amateur and semi professional musicians and theatre performers.

### RACK 'N' READY



#### FEATURES

- ▶ Up to 8 simultaneous channels of true diversity operation.
- ▶ USB based computer monitoring.
- ▶ Simple programming of transmitters via infra-red.
- ▶ Single AA transmitter battery life of approx. 10 hours.
- ▶ 19" professional flight case with built in antennae distribution and power supply as standard.

#### OPTIONAL REMOTE ANTENNA KIT:

- ▶ 2 x 10m antenna cables.
- ▶ 2 x antenna head amplifiers.
- ▶ 2 x antenna stands.

#### ASSEMBLED PACKAGE:

- ▶ 4, 6 or 8 S4.10 Receivers
- ▶ 4, 6 or 8 S4.10 transmitters in any combination of backpack or handheld.
- ▶ Antenna distribution unit .
- ▶ Power supply.
- ▶ Rack mounting trays.
- ▶ 2 x antennae.
- ▶ 19" professional flight case.

### SYSTEMS



**Earworn System**  
S4.10-E-EB GD4 Channel 70  
S4.10-E-EB GG3 Channel 38



**Lapel Microphone System**  
S4.10-L-EB GD4 Channel 70  
S4.10-L-EB GG3 Channel 38



**Theatre System**  
S4.10-T-EB GD4 Channel 70  
S4.10-T-EB GG3 Channel 38



**Aerobic System**  
S4.10-W-EB GD4 Channel 70  
S4.10-W-EB GG3 Channel 38



**Handheld Microphone System**  
S4.10-HD-EB GD4 Channel 70  
S4.10-HD-EB GG3 Channel 38



**Standard Headset System**  
S4.10-A-EB GD4 Channel 70  
S4.10-A-EB GG3 Channel 38



## RECEIVER

### S4.10-RXA

- ▶ 16 selectable frequencies available.
- ▶ Up to 8 simultaneous channels.
- ▶ Fully synthesised PLL quartz tuning technology.
- ▶ Receiver LED's show AF peak level, RF level & diversity channel A or B.
- ▶ Diversity operation with detachable antenna.
- ▶ 19" rack mount option for one or two receivers.



## DUAL RECEIVER

### S4.10-RX2A

- ▶ 16 selectable frequencies available.
- ▶ Up to 8 simultaneous channels.
- ▶ Fully synthesised PLL quartz tuning technology.
- ▶ Receiver LED's show AF peak level, RF level & diversity channel A or B.
- ▶ Diversity operation with detachable antenna.
- ▶ 19" rack mount option for one or two receivers.



## HANDHELD TRANSMITTER

### S4.10-HDX

- ▶ Locking 3.5mm jack.
- ▶ Integral switch for selection between instrument and microphone.
- ▶ Single AA transmitter battery life of approx 10 hours.



## BELTPACK TRANSMITTER

### S4.10-BTX

- ▶ Single AA transmitter battery life of approx 10 hours.



# WIRELESS SYSTEMS

## S4.04 SERIES 4 CHANNEL WIRELESS SYSTEM

The S4.04 is Trantec's simplest plug and play system, designed to launch you in to the world of wireless. Its rugged and compact frames hold a reliable multifunctioning system that is optimised for use with a range of microphones, from handheld to lapels, or headsets. Alternatively it can be used with a musical instrument.



### RECEIVER

#### S4.04-RXA

- ▶ 4 switchable licence free frequencies on Channel 70 (UK).
- ▶ Fully synthesised PLL quartz tuning technology.
- ▶ Receiver LED's show AF peak level, RF level & diversity channel A or B.



### HANDHELD TRANSMITTER

#### S4.04-HDX

- ▶ Dynamic Microphone with cardioid pattern.
- ▶ Single AA transmitter battery life of approx 10 hours.



### BELTPACK TRANSMITTER

#### S4.04-BTX

- ▶ Locking 3.5mm jack.
- ▶ Integral switch for selection between instrument and microphone.
- ▶ Single AA transmitter battery life of approx 10 hours.



### SYSTEMS

S4.04-HD-EB-GD5	Handheld Microphone Set	Channel 70
S4.04-B-EB-GD5	Beltpack Microphone Set	Channel 70
S4.04-L-EB-GD5	Lapel Microphone Set (LP2)	Channel 70
S4.04-A-EB-GD5	Standard Headset System (MIC-SJ33)	Channel 70
S4.04-W-EB-GD5	Aerobic Headset System (MIC-SJ66, AB-1000)	Channel 70
S4.04-T-EB-GD5	Theatre Headset System (MIC-SJ22-P)	Channel 70
S4.04-E-EB-GD5	Earworn System (MIC-SJEM77-P)	Channel 70

# S2.4 SERIES 16 CHANNEL WIRELESS SYSTEM

The S2.4 Series is a 16 channel digital wireless microphone system. It has adopted ISM 2.4GHz Digital Audio Frequency, which automatically filters out radio interference. Sound is clear and natural thanks to the comprehensive application of Digital Audio Processing Technology, whilst the smart .ID code Identifying Synchronisation Technology makes installation much easier.



## RECEIVERS

### S2.4-RX1

### S2.4-RX2

- ▶ 2.4GHz ISM digital wireless microphone system.
- ▶ Up to 2 simultaneous channels.
- ▶ GFSK modulation.
- ▶ No RF noise.
- ▶ Can transmit up to a distance of 30m.
- ▶ 16 bit, 38.4kHz audio format.
- ▶ Single system comes with either a handheld microphone or a beltpack transmitter.
- ▶ Dual receiver system comes with both a handheld microphone and a beltpack transmitter or two handheld transmitters.



## HANDHELD TRANSMITTER

### S2.4-HDX

- ▶ Simple programming of transmitter with built-in infra-red data link..
- ▶ Frequency and power lock facility.
- ▶ Battery life of approx 5 hours.
- ▶ Clear and intuitive LCD display.
- ▶ Professional metal enclosure.



## BELTPACK TRANSMITTER

### S2.4-BTX

- ▶ Credit card sized beltpack.
- ▶ Simple programming of transmitter with built in infrared data link.
- ▶ Frequency and power lock facility.
- ▶ Battery life of approx 5 hours.
- ▶ Detachable antenna.
- ▶ Clear and intuitive LCD display.
- ▶ Professional metal enclosure.



# WIRELESS SYSTEMS

## S5.5/S4.10/S4.04 OPTIONAL MICROPHONES

### LAVALIER

#### LP-2

S5 Series: MIC-X2  
S4 Series: MIC-LP2  
Lemo Series: MIC-TS2



### LAVALIER

#### LM-55

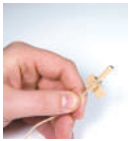
S5 Series: MIC-X55  
S4 Series: MIC-SJ55  
Lemo Series: MIC-TS55



### LAVALIER

#### LM-212

S5 Series: MIC-X212-P-R (Beige)  
MIC-X212-B-R (Black)  
S4 Series: MIC-SJ212-P-R (Beige)  
MIC-SJ212-B-R (Black)  
Lemo Series: MIC-TS212-P-R (Beige)  
MIC-TS212-B-R (Black)



### HEADWORN

#### HM-33

S5 Series: MIC-X33  
S4 Series: MIC-SJ33  
Lemo Series: MIC-TS33



### HEADWORN

#### HM-66

S5 Series: MIC-X66-BK (Black)  
MIC-X66-BL (Blue)  
MIC-X66-YE (Yellow)  
S4 Series: MIC-SJ66-BK (Black)  
MIC-SJ66-BL (Blue)  
MIC-SJ66-YE (Yellow)  
Lemo Series: MIC-TS66-BK (Black)  
MIC-TS66-BL (Blue)  
MIC-TS66-YE (Yellow)



### HEADWORN

#### HM-23

S5 Series: MIC-X23-P-R (Beige)  
MIC-X23-B-R (Black)  
S4 Series: MIC-SJ23-P-R (Beige)  
MIC-SJ23-B-R (Black)  
Lemo Series: MIC-TS23-P-R (Beige)  
MIC-TS23-B-R (Black)



### EARWORN

#### YP-MS4

S4 Series: YP-MS4E  
S5 Series: YP-MS4H



### EARWORN

#### EM-77

S5 Series: MIC-XEM77  
S4 Series: MIC-SJEM77  
Lemo Series: MIC-TSEM77



# S5.5/S4.10/S4.04 ACCESSORIES

## ACC-CASEA

- ▶ ABS Carry Case



## ACC-S5-POUCH

- ▶ Leather Belt Pouch



## ACC-CUBE-CASE

- ▶ Professional Cube Flight Case



## ACC-4U-CASE

## ACC-5U-CASE

## ACC-6U-CASE

## ACC-8U-CASE

- ▶ Professional Flight Case



## ACC-S5-HHPOUCH

- ▶ Leather Microphone Pouch



## ACC-AB1000

- ▶ Neoprene Belt Pouch



## PS-S115-UK

- ▶ UK Power Supply for S4/S5 Series Receiver



## ACC-S5RX-MB1

## ACC-S5RX-MB2

## ACC-S5RX-MB3

- ▶ Rack Mount Kit for S5 Series



## PS/RACK-PDU

- ▶ Power Supply for S4/S5 Series Receiver



## SKT-IEC-S5000

- ▶ IEC Lead



## WD-5800

- ▶ Wireless Antenna Distributor



## YW-4500

- ▶ Wall Mount Antenna



## ACC-S4.16HA

- ▶ S4.16 Head Amplifier



## ACC-SPLIT-2W

- ▶ Passive Antenna Splitter



## ANT-S4.16RX-G/D

- ▶ Receiver Antenna



## ANT-S5RX-G/D

- ▶ Receiver Antenna for S5 Series



## AMT-S4BTX-G-D

- ▶ Whip Antenna



## ANT-S4HDX-D/G

- ▶ Helical Antenna for S4 Series



## ANT-UHF-PADA

- ▶ UHF Active Paddle Amplifier

## ANT-UHF-PADP

- ▶ UHF Passive Paddle Amplifier



## PAN-1U19-BNC

- ▶ TNC Rack Mount Panel



## MW-1U-BLANK

- ▶ Blank Panel



## MB-S4RX-5-EB

- ▶ Rack Tray for Two Receivers





# WIRELESS SYSTEMS

## INFRARED WIRELESS MICROPHONE SYSTEM

A range of conference and communications systems for interference-free communication. Using infrared signals ensures that conversations are confidential to the meeting space whilst providing the flexibility to use the wireless microphone in adjacent rooms simultaneously.

### INFRARED WIRELESS MICROPHONES

#### IR-200M

- ▶ Stable voice transmission.
- ▶ Intelligent positioning of the emitter avoids drop-outs through user handling .
- ▶ Lightweight.
- ▶ Infrared light emission intensity adjustable.
- ▶ Two selectable channels.
- ▶ Antibacterial treatment.
- ▶ Low-battery indicator.



#### IR-300M

- ▶ Ready to wear design with neck strap.
- ▶ Intelligent positioning of the emitter avoids drop-outs through user handling.
- ▶ Built in electret condenser microphone.
- ▶ Infrared light emission intensity adjustable.
- ▶ Two selectable channels.
- ▶ Antibacterial treatment.
- ▶ Low-battery indicator.
- ▶ Connection of optional external microphone possible.
- ▶ An external MIC input level adjustable.



### INFRARED WIRELESS TUNER

#### IR-702T

- ▶ Built in two-channel fixed-frequency tuner.
- ▶ Up to 4 infrared light receivers per unit.
- ▶ Equipped with signal reception light and knob for microphone volume control.
- ▶ Two line outputs, one with a MIX output switch allowing output of mixed voice from channels A and B.



### INFRARED WIRELESS DISTRIBUTOR

#### IR-700D

- ▶ Equipped with 4 receiver mixing outputs and 2 distributor outputs.
- ▶ By using the IR-700D in conjunction with IR-702T and YW-1022/YW-1024, a system with up to 16 infrared receivers is configurable.



### WALL-MOUNT RECEIVER

#### IR-500R

- ▶ Reception area approx. 15m.
- ▶ Adjustable reception angle.



### WALL-MOUNT RECEIVER

#### IR-520R

- ▶ Reception area approx. 15m.



### CEILING-MOUNT RECEIVER

#### IR-510R

- ▶ Reception area approx. 8m.



### BATTERY CHARGER

#### IR-200BC



### Ni-MH Battery

#### IR-200BT-2



### DISTRIBUTORS

#### YW-1022

- ▶ 1 into 2 outputs

#### YW-1022

- ▶ 2 into 4 outputs.



# INFRARED WIRELESS CLASSROOM SYSTEM

An infrared microphone system specifically designed for educational facilities. This wireless system offers clear voice transmission in classrooms with a single wide-dispersion speaker providing 100m<sup>2</sup> coverage. Quick and easy to instal, requiring just one CAT-5 cable, this lightweight and low fatigue system is an ideal communication system for schools and colleges.

## INFRARED WIRELESS MICROPHONES

### IR-310M

- ▶ Stable voice transmission.
- ▶ Intelligent positioning of the emitter avoids drop-outs through user handling.
- ▶ Lightweight.
- ▶ Infrared light emission intensity adjustable.
- ▶ Two selectable channels.
- ▶ Antibacterial treatment.
- ▶ Low-battery indicator.



## BATTERY CHARGER

### IR-310BC



## INFRARED SPEAKER

### IR-820SP



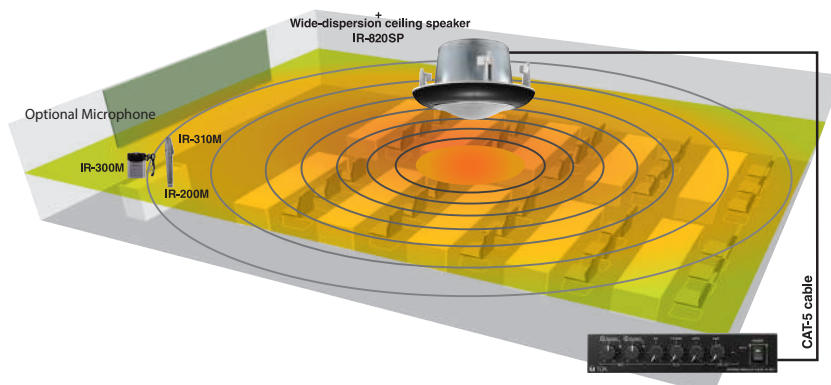
- ▶ Built-in infrared receiver and 20 W digital amplifier.
- ▶ Unique wide-dispersion acoustic structure guarantees uniform output over a wide radius.
- ▶ Bass-reflex speaker system achieving a wide frequency range and high power-handling capability.
- ▶ Easy installation with quick, optimally positioned ceiling mounting.

## INFRARED WIRELESS TUNER

### IR-820T



- ▶ Designed for use in the school classrooms assuming that their size is about 10 m x 10 m with simultaneous use in adjacent school classrooms.
- ▶ Equalizer control knobs for low-, mid- and high-frequency outputs.
- ▶ Frequency response optimized to reduce acoustic feedback.
- ▶ 3 AUX inputs for PC, TV/DVD player and MP3 audio player.
- ▶ Output muting by 25 V speaker line signal from emergency/intercom paging.
- ▶ Mixing output terminal for ALD (Assistive Listening Device).



IR-200M



IR-300M



## INTEGRATED AUDIO COLLABORATION SYSTEM

The AM-CF1 is an audio system for conference rooms incorporating TOA's original beam forming array microphone technology, digital signal processing and built-in 2-way active speakers. Connecting a webcam via integrated USB Hub, it makes a highly efficient and comfortable video conference system.

AM-CF1B



AM-CF1W



- ▶ Bluetooth® interface allows attendees via phone-line.
- ▶ LED light confirms that your voice has been successfully collected and delivered.
- ▶ Wall-mount installation frees up desk-top space.
- ▶ Black or white colour selectable depending on interior preferences/requirements.
- ▶ Compatible with Ultra PoE and power supply.
- ▶ Built-in DSP functions such as Automatic Echo Cancellation and Automatic Noise Reduction.



# TS-820 SERIES

## WIRELESS CONFERENCE SYSTEM

A 64 unit cordless infrared conference system that can be installed and removed quickly and simply with the chairman and delegate units requiring no wiring allowing for unrestricted layouts. The infrared transmitter/receiver unit and recording equipment are connected to the central unit, and the system function settings and status indications are performed at the central unit. Ideal for conferences and meetings in corporate, educational and hotel applications.

### CENTRAL UNIT WITH FBS

#### TS-820

- ▶ Up to 64 conference units controllable.
- ▶ Mic In, AUX In, Line Out, Rec Out, Headphone monitor out, EQ in/out.
- ▶ Function setting – Number of open microphones, Auto mic-off function, Speech priority selector, Feedback suppressor.
- ▶ Rack-mountable with MB-TS920 optional bracket.

### CENTRAL UNIT WITH FBS AND RECORDING

#### TS-820RC

- ▶ As per TS-820 with recording capability to USB and internal memory.



### CHAIRMAN UNIT

#### TS-821

- ▶ Priority button.
- ▶ 0.2W monitor speaker.
- ▶ 2 headphone jacks with individual volume control.
- ▶ Approx. 10 hours continuous operation with the use of optional rechargeable lithium-ion battery.



### DELEGATE UNIT

#### TS-822

- ▶ 0.2W monitor speaker.
- ▶ 2 headphone jacks with individual volume control.
- ▶ Approx. 10 hours continuous operation with the use of optional rechargeable lithium-ion battery.



### INFRARED TRANSMITTER/RECEIVERS

#### TS-905

For Low Ceilings

#### TS-907

For High Ceilings

- ▶ Cordless, easy to install and remove.
- ▶ Communication between units performed by means of infrared signals.
- ▶ Variety of mounting methods: ceiling, wall and microphone stand.



### GOOSENECK MICROPHONES

#### TS-923

Standard (470 mm)

#### TS-924

Long (620 mm)

- ▶ Two flexible sections.
- ▶ Unidirectional electret condenser microphone.
- ▶ Red lights ring to display talk released.
- ▶ XLR-4-32 connector.



# CONFERENCE SYSTEMS

## TS-920 SERIES WIRELESS CONFERENCE SYSTEM

A 192 unit cordless infrared conference system that can be installed and removed quickly and simply with the chairman and delegate units requiring no wiring allowing for unrestricted layouts. The infrared transmitter/receiver unit and recording equipment are connected to the central unit, and the system function settings and status indications are performed at the central unit. With voting function, subline for second language monitoring and inside record function this system is ideal for conferences and meetings in corporate, educational and hotel applications.

### CENTRAL UNIT WITH FBS WITH RECORDING AND VOTING

#### TS-920RC

- ▶ Up to 192 conference unit controllable.
- ▶ 2 x Mic In (Main/Sub), 3 x AUX In (Main/Sub/Main and Sub) Line Out, Rec Out, Headphone monitor out, EQ in/out.
- ▶ Function setting – Number of open microphones, Auto mic-off function, Speech priority selector, Feedback suppressor.
- ▶ Recording capability to USB and internal memory.
- ▶ Voting result indicator.
- ▶ Rack-mountable with MB-TS920 optional bracket.



### CHAIRMAN UNIT

#### TS-921

- ▶ Priority button.
- ▶ 3 voting buttons.
- ▶ 0.2W monitor speaker.
- ▶ Audio monitoring switch (Main or Sub).
- ▶ 2 headphone jacks with individual volume control.
- ▶ Approx. 10 hours continuous operation with the use of optional rechargeable lithium-ion battery.



### DELEGATE UNIT

#### TS-922

- ▶ 3 voting buttons.
- ▶ 0.2W monitor speaker.
- ▶ Audio monitoring switch (Main or Sub).
- ▶ 2 headphone jacks with individual volume control.
- ▶ Approx. 10 hours continuous operation with the use of optional rechargeable lithium-ion battery.



### INFRARED TRANSMITTER/RECEIVERS

#### TS-905

For Low Ceilings

#### TS-907

For High Ceilings

- ▶ Cordless, easy to install and remove.
- ▶ Communication between units performed by means of infrared signals.
- ▶ Variety of mounting methods: ceiling, wall and microphone stand.



### GOOSENECK MICROPHONES

#### TS-923

Standard (470 mm)

#### TS-924

Long (620 mm)

- ▶ Two flexible sections.
- ▶ Unidirectional electret condenser microphone.
- ▶ Red lights ring to display talk released.
- ▶ XLR-4-32 connector.





# TS-D1000/TS-D1100 SERIES

## DIGITAL WIRED CONFERENCE SYSTEM

A wired conference system which can be expanded to 246 connected units. Designed to be set up and disassembled quickly and easily with simple connections using CAT5e STP LAN cables. An MP3 recorder makes it possible to record all conference contents to either a connected USB memory drive or internal memory.



### MASTER CONTROL UNIT

#### TS-D1100MU

- ▶ Easy installation and operation.
- ▶ Up to 246 conference units controllable.
- ▶ Function setting – number of open microphones, auto mic-off function, speech priority selector, feedback suppressor.
- ▶ Recording capability with 32 GB USB memory drive and 1GB internal memory.
- ▶ Included USB audio interface.
- ▶ Mode selection for ID assignment.
- ▶ Rack-mountable using MB-TS920 optional bracket.

### CHAIRMAN UNIT

#### TS-D1000-CU

- ▶ Priority button.
- ▶ Easy installation and operation.
- ▶ Voice activation.
- ▶ 2 headphone jacks with individual volume control.
- ▶ 100 m (328,08 ft) maximum cable distance.



### MICROPHONES

#### TS-D1000-M1

Standard (518 mm)

#### TS-D1000-M2

Long (668 mm)

- ▶ One flexible section.
- ▶ Unidirectional electret condenser microphone.
- ▶ In use LED indicator.
- ▶ XLR-4-32 connector.



### SUB CONTROL UNIT

#### TS-D1000-SU

- ▶ 5 sub control units can be connected to the master unit.
- ▶ Add up to 48 conference units to the system.
- ▶ Rack mountable with MB-15B-BK or MB-15B-J.

### DELEGATE UNIT

#### TS-D1000-DU

- ▶ Easy installation and operation.
- ▶ Voice activation.
- ▶ 2 headphone jacks with individual volume control.
- ▶ 100 m (328,08 ft) maximum cable distance.



### EXTENSION UNIT

#### TS-D1000-EX

- ▶ Wiring distance can be extended up to 100m (328ft) per 1 line.



### MOUNTING BRACKET

#### MB-TS920

- ▶ Suitable for all TS Series conference systems.



## IP NETWORK INTERCOM SYSTEM

The unique N-8000 IP Intercom System is an integrated audio communication system that employs packet audio technology over the IP network to achieve fast, accurate communications with optimal security and reliability.

Its open architecture permits flexible interfacing with other systems, moreover, reducing costs by enabling users to upgrade and expand their intercom system without replacing currently installed equipment, such as surveillance cameras, telephones and access controls. Since the N-8000 system is not server based, users can use dedicated TOA software to manage settings and centralised control on a PC and to conduct real time monitoring of system operation and line status using an internet browser.



# TECHNICAL

IP AUDIO

## TECHNICAL SUPPORT

Our TOA team of technical experts are here to provide support to enable you to understand our product range, help with designing systems and provide the best audio solutions for your applications. Here are just some of the ways we can help you win projects:

VOICE ALARM SYSTEMS

SPEAKERS

## PHONE, ONLINE OR EMAIL

You can connect with technical support by phone, email or online meeting where they can assist you with product and application queries, offer fault finding advice and offer support in project management. They can also carry out site visits if required.

PRO SOUND

## DESIGN, QUOTATIONS AND BUILD

Our team are experts in the design of audio systems and have worked on many projects from performance venues to stadia and from health care centres to transport hubs. Using the latest in sound design technology they can help produce drawings and model systems specifically for the space audio is required. Our workshop team custom-build public address and voice alarm systems in our workshop ready for delivery to site.

DISTRIBUTION

WIRELESS SYSTEMS

## INSTALLATION GUIDANCE

They can advise on installations prior to going to site and give expert advice whilst the installation is being carried out trouble shooting any issues that arise.

CONFERENCE SYSTEMS

## COMMISSIONING

Once an installation is complete for voice alarm they can commission the system for you to ensure that it adheres the relevant standards and issue documentation for your end-user.

INTERCOM

TECHNICAL

## MAINTENANCE ADVICE

We can offer advice on maintaining existing systems and can offer remote access to systems if required. We can also advise on upgrades and future products that can enhance existing systems.

## TRAINING

We offer a free product training programme to give clients a greater understanding of TOA products. Our technical team are experts in voice alarm and 100V line and offer specific courses in these subjects.

## DOCUMENTATION

We can assist you with advice on the correct documentation you need to supply to your end user and can help with certification if required as part of our commissioning support.

## SOFTWARE UPGRADES

We can help guide you with software installations and advise on the latest versions and compatibility with other systems. We can offer advice on integration with third party software products especially with our IP audio systems.

## TOA TOOLS DATABASE AND COOKBOOKS

We can guide you through useful tools such as the TOA data library and TOA cookbooks to give you the most up to date and informative product information backed by our 1:1 technical team support.



# WIRELESS FREQUENCY CHARTS

CHANNEL	21	22	23	24	25	26	27	28	29	30
FREQ RANGE	470-478 MHz	478-486 MHz	486-494 MHz	494-502 MHz	502-510 MHz	510-518 MHz	518-526 MHz	526-534 MHz	534-542 MHz	542-550 MHz
CHANNEL	31	32	33	34	35	36	37	38	39	40
FREQ RANGE	550-558 MHz	558-566 MHz	566-574 MHz	574-582 MHz	582-590 MHz	590-598 MHz	598-606 MHz	606-614 MHz	614-622 MHz	622-630 MHz
CHANNEL	41	42	43	44	45	46	47	48	49	50
FREQ RANGE	630-638 MHz	638-646 MHz	646-654 MHz	654-662 MHz	662-670 MHz	670-678 MHz	678-686 MHz	686-694 MHz	694-702 MHz	702-710 MHz
CHANNEL	51	52	53	54	55	56	57	58	59	60
FREQ RANGE	710-718 MHz	718-726 MHz	726-734 MHz	734-742 MHz	742-750 MHz	750-758 MHz	758-766 MHz	766-774 MHz	774-782 MHz	782-790 MHz
CHANNEL	65	70								
FREQ RANGE	822-830 MHz	863-865 MHz								

- Channels 21-30 - PMSE is interleaved with TV transmissions throughout UK
- Channels 31-37 (600 MHz band) Ofcom has announced that new services will be launched in these channels but that PMSE will continue to have access.
- Channels 38 - PMSE access to Channel 38 between 606.5 MHz and 613.5 MHz remains
- Channels 39-60 - PMSE is interleaved with TV transmissions throughout the UK
- Channels 65 - PMSE has released 822-830 MHz to be included as part of the Channel 38 licence
- Channel 70 - PMSE access remains unchanged. 863-865 MHz is still available as licensed exempt spectrum

## CONTACT US

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FOR FURTHER DETAILS, SPECIFICATIONS  
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Specifications are subject to change without notice.

CatVer 1.0 2024