

# PRODUCT RANGE



# We Supply Sound, not Equipment.

Keberhasilan kami dalam menjadi salah satu pemimpin pasar di Indonesia tak lepas dari tanggung jawab dan komitmen untuk terus mengasah keahlian dalam menghadirkan produk-produk berkualitas. Produk-produk tersebut dirancang untuk menjawab kebutuhan Anda akan sistem tata suara dan komunikasi, sesuai dengan filosofi kami, "We Supply Sound, Not Equipment."

Filosofi inilah yang menjadi pendorong utama kami untuk tidak hanya menjaga konsistensi dalam menciptakan produk-produk berkualitas, tetapi juga untuk terus menjadi solusi dan pilihan utama bagi Anda. Kami berkomitmen untuk menghadirkan sistem tata suara dan komunikasi yang mampu menyajikan kejernihan serta keakuratan suara terbaik.

Kami sangat menyadari pentingnya peran serta konsumen, mitra, dan penghargaan atas kontribusi seluruh karyawan kami yang telah mendukung kami selama puluhan tahun. Semua ini membentuk fondasi yang kuat untuk terus berinovasi dan mengembangkan produk kami, guna memenuhi harapan dan kebutuhan Anda di masa depan.



# Smiles *for the* Public

## Smiles for the Public

Seiring dengan semakin berkembangnya kebutuhan akan sistem tata suara dan komunikasi yang semakin kompleks, kami senantiasa berkomitmen untuk terus meningkatkan kualitas dan inovasi dalam setiap aspek layanan kami. Kami memahami bahwa setiap detail, dari kualitas suara hingga kemudahan akses, memiliki peran yang sangat penting dalam mendukung aktivitas Anda sehari-hari.

Dengan itu, kami terus memperluas cakupan bisnis kami, berinovasi, dan menghadirkan solusi terbaik yang dirancang untuk memenuhi berbagai kebutuhan Anda. Melalui rangkaian produk berkualitas tinggi yang tidak hanya memberikan kenyamanan dan keamanan, tetapi juga hiburan yang tiada banding, kami bertekad untuk menjadi bagian integral dalam kehidupan Anda.

Kami percaya bahwa setiap elemen dalam hidup Anda membutuhkan perhatian khusus, dan itulah mengapa kami senantiasa berusaha memberikan kontribusi terbaik di setiap langkah Anda. Kami hadir untuk memastikan Anda merasakan pengalaman yang lebih baik, lebih aman, dan lebih menyenangkan dalam setiap interaksi, di setiap momen yang berarti.

## Mixer Amplifier

### Mixer Amplifier



#### ZA-230W 30W

- Cost effective package amplifier that is compact, lightweight and best suited for paging and background music distribution
- 3 microphone inputs and 1 AUX input
- 100V and 4Ω speaker outputs

Specification	ZA-230W
Power Source	220V AC or 12V DC
Power Consumption	34W (AC Operation at IEC 60065)
Rated Output	30W
Frequency Response	50Hz - 20kHz, ±3dB
Input	MIC 1-3 : -60dB* (1.0mV), 600Ω, Unbalanced, Phone Jack AUX : -24dB* (60mV), 10kΩ, Unbalanced, RCA pin jack
Output	Speaker Out : Floating Balanced; High Impedance : 330Ω(100V); Low Impedance: 4Ω(11V)
S/N Ratio	60dB or more (MIC 1-3), 70dB or more (AUX)
Tone Control	Bass: -10dB at 100Hz, Treble: -10dB at 10kHz
Indicator	Power LED, Signal LED
Finish	Panel : ABS resin, black ; Case: steel plate, black
Dimensions	350(W) x 100 (H) x 240(D)mm
Weight	3.5kg

\*0dB = 1V

### Mixer Amplifier



#### ZA-2030 30W

#### ZA-2060 60W

#### ZA-2120 120W

#### ZA-2240 240W

- Cost effective and durable mixer power amplifier
- User friendly front panel allows easy operation
- 3 electronically balanced microphone inputs, 2 AUX inputs and recording output
- Phantom power at MIC1
- Wide tone - control adjustment range of +/- 10dB for both bass and treble
- 100V/70V line or 4Ω speaker outputs
- Booster amplifier for additional power

### Power Amplifier



#### ZP-2240 240W

- 100V line input allows connection to speaker output of ZA-2000 Series amplifiers
- Power remote switch by make contact input

Specification	ZA-2030	ZA-2060	ZA-2120	ZA-2240	ZP-2240
Power Req	220 - 240V AC or 24V DC				
Power Consumption	34W (AC operation EN 60065)	72W (AC operation EN 60065)	124W (AC operation EN 60065)	238W (AC operation EN 60065)	
Rated Output	30W	60W	120W	240W	
Frequency Response	50Hz - 20kHz (±3dB)				
Input	MIC 1-3: -60dB*, 600Ω, Balanced, Phone Jack AUX 1,2: -20dB*, 10kΩ, Unbalanced, RCA Pin Jack				Line in: 0dB*, 10kΩ, Balanced, Screw terminal 100V Line in: 40dB*, 330kΩ unbalanced, screw terminal Power remote control: Make Contact
Output Speaker Out High Impedance Low Impedance (4Ω) Rec Out	Balanced (floating) 330Ω(100V), 170Ω(70V) 11V 0dB, 600Ω, Unbalanced, RCA Pin Jack	Balanced (floating) 170Ω(100V), 83Ω(70V) 15.5V 0dB, 600Ω, Unbalanced, RCA Pin Jack	Balanced (floating) 83Ω(100V), 42Ω(70V) 22V 0dB, 600Ω, Unbalanced, RCA Pin Jack	Balanced (floating) 42Ω(100V), 21Ω(70V) 31V 0dB, 600Ω, Unbalanced, RCA Pin Jack	Balanced (floating) 42Ω(100V), 21Ω(70V), 4Ω (31V)
Phantom Power	DC + 21V (MIC1)				-
S/N Ratio	Over 60dB				
Tone Control	Bass: ±10dB at 100Hz/ Treble: ±10dB at 10kHz				
Muting	MIC1 : Mutes other input signals by 0-30dB attenuation				-
Dimensions	420(W) x 101(H) x 280(D)in mm			420(W) x 101(H) x 360(D)in mm	
Weight	5kg	7kg	10.8kg	13.2kg	

\*0dB = 1V



■ Mixer Pre-Amplifier  
**Z-MX9200-AS 1**



- Wireless mixer
- Up to 9 inputs
- Can be controlled via an android touch screen device connected by bluetooth

Specification	Z-MX9200-AS 1
Power Source	AC 220 - 240V, 14W
Audio Input	Input CH 1 with Phantom option 19 V DC: - CHIME MIC: Balanced, Selectable sensitivity -55 dB (1.8 mV)/ -30 dB (30 mV), 2.2 kΩ, rated 1 kHz, RJ45 connector - MIC: Balanced, Selectable sensitivity -55 dB (1.8 mV)/ -30 dB (30 mV), 2.2 kΩ, rated 1 kHz, Phone jack connector Input CH 2-4 with Phantom option 19 V DC: - Balanced, Sensitivity -55 dB (1.8 mV), 2.2 kΩ, rated 1 kHz, Phone jack connector Selectable Input CH 5 with options: - MIC: Balanced, Sensitivity -55 dB (1.8 mV), 2.2 kΩ, rated 1 kHz, Phone jack connector - AUX: Unbalanced, Sensitivity 0 dB, 10 kΩ, rated 1 kHz, RCA jack connector Selectable Sensitivity Input CH 6-8, Removable terminal 3 pins with sensitivity options: - LINE: Balanced, Sensitivity 0 dB, 2.2 kΩ, rated 1 kHz - MIC: Balanced, Sensitivity -55 dB (1.8 mV), 2.2 kΩ, rated 1 kHz Selectable Sensitivity Input CH 9, Removable terminal 3 pins with sensitivity options: - MIC: Balanced, Sensitivity -55 dB (1.8 mV), 2.2 kΩ, rated 1 kHz - STREAMING: Unbalanced, Sensitivity 0 dB, 10 kΩ, rated 1 kHz
Audio Output	Audio OUT A & B, Balanced, Removable terminal 3 pins Optional output level: 0 dB / -10 dB (300 mV) / -20 dB (100 mv), 600 Ω, rated 1 kHz
Control Output	9 Shortcut switch IN, 2 Shortcut switch OUT, 1 Shortcut switch VOLUME, 1 Shortcut switch Tone Control, 1 Shortcut switch Input Selection, 1 Navigation switch (Right, Left, Push)
Tone Control	Bass ± 13 dB at 100 Hz, Middle ± 13 dB at 1 kHz, Treble ± 13 dB at 10 kHz
Distortion	Under 1% at 1 kHz, rated power
Frequency Response	30Hz - 20kHz, ±3dB
Indicator	LCD display with backlight green, POWER indicator (green), STATUS indicator (green), SIGNAL indicator (green), PEAK indicator (red)
Connection	Bluetooth 4.2, USB Type B (PC Setting/Update Firmware)
Finish	Front Panel: Aluminum Hair Line, Painting Black / Case: Steel Plate, Painting Black
Dimensions	420(W) x 59(H) x 339.7(D) in mm
Weight	3.3kg
Accessory	6P connector x 2, 3P connector x 2

## Mixer Amplifier

### Digital Mixer Amplifier

#### ZA-3200D-AS 1 Series

ZA-3212D-AS 1 **120W**

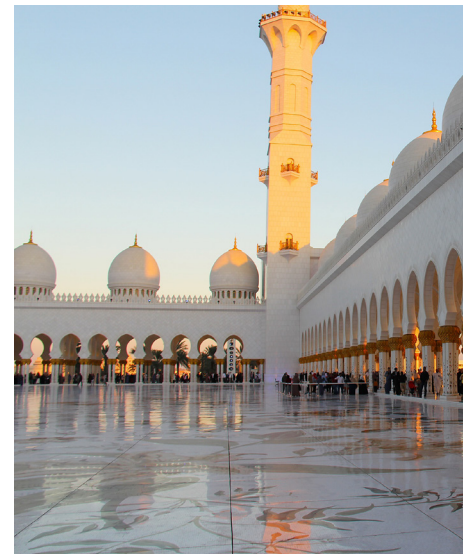
ZA-3224D-AS 1 **240W**

ZA-3248D-AS 1 **480W**



- Available in 120W, 240W, and 480W to suit any applications
- Universal power input : 100 - 240V
- Feature MP3 Player, FM Radio, Bluetooth, Zone Selection, Echo Function
- Up to 4 MIC, 2 AUX
- Input RJ-45 for Chime Microphone (ZM-380C-AS)
- USB/SD/BT Player (include record function)
- Selectable switch for Low and High Impedance

Specification	ZA-3212D-AS 1	ZA-3224D-AS 1	ZA-3248D-AS 1
Power Source	100 - 240V AC, 50/60Hz	100 - 240V AC, 50/60Hz or 24V DC	
Power Consumption (EN60065)	44W (AC operation at 1/8 maximum output without clip)	62W (AC operation at 1/8 maximum output without clip)	99W (AC operation at 1/8 maximum output without clip)
Rated Output	120W	240W	480W
Input	MIC 1: 1mV (-60dB*), 600Ω, Balanced, Phone Jack, selectable to RJ45 with echo function MIC 2 - 3: 1mV (-60dB*), 600Ω, Balanced, phone jack MIC 4: 1mV (-60dB*), 600Ω, Balanced, phone jack, selectable to AUX 1 AUX 1: 100mV (-20dB*), 10kΩ, Unbalanced, RCA pin jack, selectable to MIC 4 AUX 2: 100mV (-20dB*), 10kΩ, Unbalanced, RCA pin jack		
Output	Speaker output in screw type terminal		
Speaker Out	Speaker output in screw type terminal		
Direct line (Selectable)	83Ω(100V) or 4Ω	42Ω(100V) or 4Ω	21Ω(100V) or 4Ω
Rec Out	0dB*, 600Ω, Unbalanced, RCA pin jack		
Phantom Power	DC +21V (MIC 1)		
S/N Ratio	Over 60dB		
Total Harmonic Distortion	Under 1% at 1kHz, 1/3 rated power		
Muting	MIC1: Mutes other input signals by 0-30dB attenuation		
Frequency Response	50Hz - 20kHz		
Tone Control	Bass: ±10dB at 100Hz/ Treble: ±10dB at 10kHz		
Indicator	Power, Signal, Peak, Protect		
Operating Temperature	0° to + 40° C		
Ventilation	Natural Air Cooling	Fan Cooling	
Finish	Panel: ABS resin, black/ Case: Steel plate, black		
Dimensions	420(W) x 100.9(H) x 357 (D)mm		
Weight	4.6kg	5.1kg	5.4kg



Application : Commercial Buildings, Houses of Worship, Retail, Educational Facilities, Factories

## Mixer Amplifier

### Digital Mixer Amplifier

<b>ZA-3212DM-AS 1</b>	120W
<b>ZA-3224DM-AS 1</b>	240W
<b>ZA-3248DM-AS 1</b>	480W
<b>ZA-3224DMZ-AS 1</b>	240W
<b>ZA-3248DMZ-AS 1</b>	480W



Specification	ZA-3212DM-AS 1	ZA-3224DM-AS 1	ZA-3248DM-AS 1	ZA-3224DMZ-AS 1	ZA-3248DMZ-AS
Power Source	100 - 240V AC, 50/60Hz				
Power Consumption (EN60065)	44W	62W	99W	62W	99W
Rated Output	120W	240W	480W	240W	480W
Input	MIC 1: -60dB*, 600Ω, Balanced, Phone Jack, selectable to RJ45 MIC 2 - 3: 1mV (-60dB*), 600Ω, Balanced, phone jack MIC 4: 1mV (-60dB*), 600Ω, Balanced, phone jack, selectable to AUX 1 AUX 1: 100mV(-20dB*), 10kΩ, Unbalanced, RCA pin jack, selectable to MIC 4 AUX 2: 100mV(-20dB*), 10kΩ, Unbalanced, RCA pin jack MP3: LED Display, Support USB, SD/MMC card (up to 32GB), Radio FM, Record, Bluetooth				
Output	Speaker output in screw type terminal				
Speaker Out	Speaker output in screw type terminal				
Direct line (Selectable)	83Ω(100V) or 4Ω	42Ω(100V) or 4Ω	21Ω(100V) or 4Ω	42Ω(100V) or 4Ω	21Ω(100V) or 4Ω
Rec Out	0dB*, 600Ω, Unbalanced, RCA pin jack				
Zone Selector	-			5 zones selector (all zones simultaneously selectable)	
Phantom Power	DC +21V(MIC 1)				
S/N Ratio	Over 60dB				
Total Harmonic Distortion	Under 1% at 1kHz, 1/3 rated power				
Muting	MIC1: Mutes other input signals by 0-30dB attenuation				
Frequency Response	50Hz - 20kHz				
Tone Control	Bass: ±10dB at 100Hz/ Treble: ±10dB at 10kHz				
Indicator	Power, Signal, Peak, Protect				
Operating Temperature	0° to + 40° C				
Ventilation	Natural Air Cooling	Fan Cooling			
Finish	Panel: ABS resin, black/ Case: Steel plate, black				
Dimensions	420(W) x 100.9(H) x 357 (D)mm				
Weight	4.6kg	5.1kg	5.4kg	5.1kg	5.4kg
Accessory	Antenna FM Radio (1m) x 1			Removable terminal plug (2 pins) x 5	

\*0dB = 1V



## Mixer Amplifier

### Digital Power Amplifier

#### ZP-3248D-AS 1



Specification	ZP-3248D-AS 1
Power Source	100 - 240V AC, 50/60Hz or 24V DC
Power Consumption (EN60065)	99W (AC operation at 1/8 maximum output without clip)
Rated Output	480W
Input	Line In: 0dB*, 10kΩ, Balanced, screw terminal 100V Line In: 40dB*, 30kΩ, Unbalanced, screw terminal
Output	
Speaker Out	Speaker output in screw type terminal
Direct line (Selectable)	21Ω(100V) or 4Ω
Loop Out	0dB*, 10kΩ, balanced, screw terminal
Control	Remote power control, screw terminal
S/N Ratio	Over 70dB
Total Harmonic Distortion	Under 1% at 1kHz, 1/3 rated power
Frequency Response	50Hz - 20kHz
Tone Control	Bass: ±10dB at 100Hz/ Treble: ±10dB at 10kHz
Indicator	Power, Signal, Peak
Operating Temperature	0° to + 40°C
Ventilation	Fan Cooling
Finish	Panel: ABS resin, black/ Case: Steel plate, black
Dimensions	420(W) x 100.9(H) x 351.3 (D)mm
Weight	5.2kg

\*0dB = 1V

Model	MP3	Zone Selection	100V Line In	Echo Function
ZA-3212D-AS 1 ZA-3224D-AS 1 ZA-3248D-AS 1	x	x	x	√
ZA-3212DM-AS 1 ZA-3224DM-AS 1 ZA-3248DM-AS 1	√	x	x	x
ZA-3224DMZ-AS 1 ZA-3248DMZ-AS 1	√	√	x	x
ZP-3248D-AS 1	x	x	√	x

### Car Amplifier

#### ZA-250S



Specification	ZA-250S
Output	25W Rated
Power Requirements	DC 14V
Input	Mic 600Ω unbalanced. Aux: 10kΩ unbalanced
Speaker Output	4Ω-8Ω
Distortion	Under 5%
Frequency Response	100 - 10,000Hz ±3dB
Standar Accessories	Dynamic microphone 600Ω unbalanced
Signal Sound	Sirene
Dimensions	178(W) x 50(D) x 144(H) in mm
Weight	1.1kg
Color	Black

## Horn Speaker

### Paging Horn Speaker

**ZH-610S | ZH-610SM**

**ZH-615S | ZH-615SM**

**ZH-625S | ZH-625SM**



- Both high impedance (70V/ 100V lines) models and low impedance (8Ω) models available
- Stainless steel brackets and hardware (screws, bolts), and powered-coated horn ensure
- Superb weatherproofing and corrosion-resistance
- Shock-resistant aluminum oval horn
- IP65 certified weatherproof construction

Specification	ZH-610S	ZH-610SM	ZH-615S	ZH-615SM	ZH-625S	ZH-625SM
Rated Input	10W		15W		25W	
Rated Impedance	8Ω	100V Line: 10W, 5W, 3W, 1W	8Ω	100V Line: 15W, 10W, 5W, 3W	8Ω	100V Line: 25W, 15W, 10W, 5W
Sound Pressure Level (1W,1m)	≥ 107dB		≥ 109dB		≥ 110dB	
Frequency Response	315Hz - 12,5kHz		280Hz - 12.5kHz		297 - 8.409Hz	
Dimension	172(W) x 161(H) x 188(D) in mm		222(W) x 179(H) x 234(D) in mm		285(W) x 227(H) x 277(D) in mm	
Weight	1kg	1.2kg	1.1kg	1.3kg	1.7kg	2.1kg
Material	Horn Flare: Aluminum; Horn inner & Cover: ABS Resin; Brackets: Steel; Bracket Holder: Aluminum Die Cast					
Finish	Horn(Flare, Inner) & Bracket Holder: Off White, Bracket: Dark Gray					

### Horn Speaker

**ZH-615R | ZH-615RM**



Specification	ZH-615R	ZH-615RM
Rated Input	15W	
Rated Impedance	8Ω	100V Line: 670Ω (15W), 1kΩ(10W), 2kΩ(5W), 3.3kΩ(3W)
Sound Pressure Level (1W,1m)	110dB	
Frequency Response	280 - 12.500Hz	
Dimension	φ196(W) x 240(D) in mm	φ196(W) x 234(D) in mm
Weight	1.1kg	1.3kg
Finish	Horn Flare: Aluminum, off-white; Reflector Horn & Rear cover: ABS resin, off white; screw and bolts: steel	

**ZH-5025B/5025BM**



Specification	ZH-5025B	ZH-5025BM (Dengan Transformer)
Rated Input	25W	
Rated Impedance	16Ω	100 V line : 25W, 15W, 10W, 5W
Sound Pressure Level (1W,1m)	108dB	
Frequency Response	200Hz-6500Hz	
Dimension	φ550(W) x 477(D) in mm	
Weight	3.9kg	4.2kg
Material	Horn(Flare, inner): Aluminum; Brackets: Steel; Unit Cover: ABS resin	
Finish	Horn(Flare, inner) Ash White, Others: Dark Gray	

**ZH-5050-AS/ZH-5050M-AS**



Specification	ZH-5050-AS (Tanpa Transformer)	ZH-5050M-AS (Dengan Transformer)
Rated Input	50W	
Rated Impedance	16Ω, Low Impedance	100 V line : 200Ω(50W), High impedance
Sound Pressure Level (1W,1m)	110dB	
Frequency Response	160Hz-6kHz	
Dust/Water Protection	IP65	
Finish	Horn Flare, Aluminum, white, coating; Reflector Horn : Plastic resin, white Bracket Holder : Aluminum, gray, coating; Bracket : Steel, gray, coating Rear Cover : Plastic resin, gray; Screw and Bolts : Stainless steel	
Dimension	φ500(W) x 420(D) in mm	φ500(W) x 463(D) in mm
Weight	4.4kg	5kg

**Horn Speaker**

**ZH-652T**



Specification	ZH-652T
Driver	ZH-662D-AS, ZH-662MD-AS
IP Code	IP65
Sound Pressure Level (1W,1m)	110dB
Frequency Response	200 - 6000Hz (when operated with a driver)
Driver Coupling	1-3/8 18 threads (inc screw)
Dimensions	φ500 x 357mm
Finish	Horn & Flange: Aluminum,White, Powder Coating; Reflector Horn: HIPS, White;
	Bracket: Steel, White, Powder Coating; Screw & Bolt: Stainless Steel
Weight	2.7kg



**Driver Unit**

**ZH-662D-AS**

**ZH-662MD-AS**



Specification	ZH-662D-AS	ZH-662MD-AS
Horn		ZH-652T
Rated Input		60W
Line Voltage		100V Line
Rated Impedance	16Ω	100V Line: 170Ω (60W), 330Ω (30W), 670Ω (15W)
Sound Pressure Level (1W,1m)		110db
Frequency Response		150 - 8.000Hz (when operated with JIS C5504 standard horn)
Dimension	φ139 x 108mm	φ139 x 151mm
Weight	2kg	2.7kg
Material	Upper Cover: Aluminum, White, Powder Coating. Unit Case: HIPS, White. Screws: Stainless Steel. Cable Speaker : PVC insulated cabtyre,white	

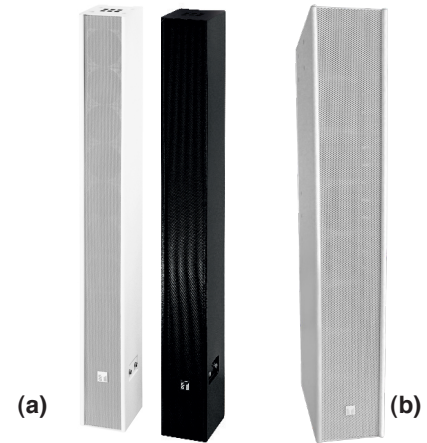
## Slim Array Speaker

### ZS-S60CW/CB (a)

- 90° horizontal x 0° vertical directivity angle
- Low and high impedance selectable by rotary switch
- Stackable up to 2 units for wider coverage

### ZS-S240CW-AS (b)

- 100° horizontal x 5° vertical directivity angle
- Use the MT-S0601 matching transformer for high impedance application when driven with a single amplifier
- Stackable up to 2 units for wider coverage
- 2-way speaker, with tweeters aligned at the foreground to the side, enabling less disruption to the sound quality of the woofers, while maintaining the unit slim



Specification	ZS-S60CW/CB	ZS-S240CW-AS
Type		Bass reflex type
Max. Input Power	120W (continuous pink noise)	Continuous : 240W ; Program : 480W
Rated Input	60W	-
Rated Impedance (100V line)	167Ω (60W), 330Ω (30W), 500Ω (20W), 1kΩ(10W); low impedance: 8Ω	8Ω
Sound Pressure Level (1W,1m)	95dB	94dB
Frequency Response	180Hz-15kHz	95Hz-20kHz
Speaker Component	8cm Cone type x 9	Low Frequency: 10cm (4") Cone Type Woofer x 8; High Frequency: 2.5cm (1") Balanced Dome Tweeter x 24
Finish	Enclosure: MDF, paint, white/black; punched net, wall bracket, side panel; metal cover: SECC, paint, white/black	Enclosure: White painted, MDF Board Net Grille : White painted, Punched ste
Dimension	100(W) x 883(H) x 130(D) in mm	160(W) x 950(H) x 262(D) in mm
Weight	8.2kg	17kg

## Metal Column Speaker

### ZS-107-AS

### ZS-207-AS



Specification	ZS-107-AS	ZS-207-AS
Rated Input	10W (Max. 15W)	20W (Max. 30W)
Rated Impedance (100V line)	100V line : Hot 1kΩ - black, Com - white	100V line : Hot 500Ω - black, Com - white
Sound Pressure Level	93dB (1w,1m)	96dB (1w,1m)
Frequency Response	80-20.000Hz	85-20.000Hz
Dispersion Angle	Horizontal : 200° (1kHz); 98° (4kHz) Vertical : 110° (1kHz); 26° (4kHz)	Horizontal : 200° (1kHz); 98° (4kHz) Vertical : 46° (1kHz); 39° (4kHz)
Speaker Component	10cm Cone type x 2	10cm Cone type x 4
IP Code		IP44
Finish		Enclosure case : Extrude Aluminum, Black, Paint; Side panel : Resin, Black, Paint Punched Net : Surface tread steel plate, Black, Paint
Dimension	140(W) x 315(H) x 140(D)mm	140(W) x 560(H) x 140(D)mm
Weight	2.2kg	2.7kg
Accessory		Speaker Bracket ...1, Wall Bracket...1, BH Screw M5 x 60 Fe Blk 3-SEMS...1

## Ceiling Speaker

### Flush Mount Ceiling Speaker

#### ZS-658R



- Spring clamp mechanism for easy speaker mounting to the ceiling
- New Color Code: RAL 9016
- Optional flame retardant (HIPS UL-94VO) backcan

Specification	ZS-658R
Rated Output	6W (100V Line)
Rated Impedance	100 V Line: 1.7 kΩ (6 W), 3.3 kΩ (3 W), 10 kΩ (1 W)
Sensitivity (1W,1m)	90dB
Frequency Response	65Hz - 18kHz
Speaker Component	16cm cone-type
Dimensions for Fixing Hole	Mounting hole: $\phi 170 \pm 5\text{mm}$ ( $\phi 6.69" \pm 0.2"$ ) Ceiling thickness 5 - 25 mm (0.2" - 0.98")
Speaker Mounting Method	Spring Clamp
Finish	Baffle: Polypropylene resin, white (RAL 9016 equivalent) Grille: Surface-treated Steel Plate Net, white (RAL 9016 equivalent), paint
Dimensions	$\phi 192 \times 73$
Weight	500g



#### Z-2852C Z-2352C



#### Z-2352SC



#### Z-1522SC



- Speaker designs that harmonize with the venue's architecture and decor
- Quick and easy installation and decor new SUS spring clamp installation method
- Wide frequency response
- Greater variety of ceiling speaker diameters (4"(10cm), 5"(12cm), 6"(16cm))
- Thin panel does not clash with interior design

Specification	Z-2852C	Z-2352C	Z-2352SC	Z-1522SC
Rated Input	60W	30W	6W	
Power Handling Capacity	Continuous pink noise : 90W (8Ω); Continuous program : 180W (8Ω)	Continuous pink noise : 60W (8Ω); Continuous program : 120W (8Ω)	Continuous pink noise : 9W (8Ω); Continuous program : 18W (8Ω)	
Rated Impedance	170Ω(60W), 330Ω(30W), 670Ω(15W), 3.3kΩ(3W)/ 16Ω, 8Ω (low impedance connection)	330Ω(30W), 1kΩ(10W), 3.3kΩ(3W), 10kΩ(1W)/ 16Ω, 8Ω (low impedance connection)	1,7kΩ(6W), 3.3kΩ(3W), 10kΩ(1W)/ 16Ω, 8Ω (low impedance connection)	
Sensitivity (1W,1m)	91dB	90dB	89dB	88dB
Frequency Response	60-20.000Hz	70-20.000Hz	80-20.000Hz	65-18.000Hz
Speaker Component	16cm cone-type	12cm cone-type	12cm cone-type	10cm cone-type
Finish	Enclosure: Steel plate, plating; Baffle: Fire resistant ABS resin (resin material grade: UL-94V-0 or its eqv), black; Rim: fire-resistant ABS resin; Punched net: white, paint		Baffle: Fire resistant ABS resin (resin material grade: UL-94V-0 or its eqv), black; Rim: fire-resistant ABS resin, white, paint; Dust-proof bag: Artificial fiber, black	
Dimensions	$\phi 280 \times 227\text{mm}$	$\phi 230 \times 229\text{mm}$	$\phi 230 \times 154\text{mm}$	$\phi 155 \times 117\text{mm}$
Weight	5.1kg	3.7kg	1.5kg	1kg

## Ceiling Mount Speaker

- Suitable for voice alarm system and background music system use in high quality sound
- Easy Mounting

**ZS-1860-AS**



**ZS-1860F-AS**



**ZS-2360-AS**



Specification	ZS1860-AS	ZS-1860F-AS	ZS-2360-AS
Rated Noise Power	6 W (100 V Line), 3 W (70 V Line)		
Rated Impedance	100V line: 1.7kΩ(6W), 3.3kΩ (3W), 6.7kΩ (1.5W), 13kΩ (0.8W) 70V line: 1.7 kΩ(3W), 3.3kΩ (1.5W), 6.7kΩ (0.8W), 13kΩ (0.4W)		
Sensitivity	94dB (1W, 1 m) (330Hz -3.3kHz, pink noise)	95dB (1W, 1 m) (330Hz -3.3kHz, pink noise)	94dB (1W, 1 m) (330Hz -3.3kHz, pink noise)
Frequency Response	55Hz - 20kHz (pink noise -20dB)	100 Hz - 20 kHz (pink noise -20 dB)	45 Hz - 20 kHz (pink noise -20 dB)
Speaker Component	12cm (5") cone-type		16 cm (6") cone-type
Dimensions for Fixing Hole	Mounting hole: $\phi 150 \pm 3\text{mm}$ (5.91" $\pm$ 0.12") Ceiling thickness: 5 - 25mm (0.2" - 0.98")	Mounting hole: $\phi 156 \pm 3\text{mm}$ (6.14" $\pm$ 0.12") Ceiling thickness: 5 - 25mm (0.2" - 0.98")	Mounting hole: $\phi 200 \pm 3\text{mm}$ (7.87" $\pm$ 0.12") Ceiling thickness: 5 - 25mm (0.2" - 0.98")
Speaker Mounting Method	Suspension Spring	Spring Clamp	Suspension Spring
Application Cable	Solid wire: 0.5 - 3mm <sup>2</sup> (AWG20 - 12)		
Connection	Push wire connection (Bridging terminal 2 - branch type)		
Finish	Frame: Steel plate, white*, paint Grille: Steel net, white*, paint	Frame: Steel plate, white*, paint Grille: Steel net, white*, paint Fire Dome: Steel plate, plating	Frame: Steel plate, white*, paint Grille: Steel net, white*, paint
Dimensions	$\phi 180 \times 5$ (exposed section) + 65(D)mm ( $\phi 7.09" \times 0.19" + 2.56"$ )	$\phi 180 \times 5$ (exposed section) + 100(D)mm ( $\phi 7.09" \times 0.2" + 3.94"$ )	$\phi 230 \times 5$ (exposed section) + 71(D)mm ( $\phi 9.06" \times 0.19" + 2.80"$ )
Weight	590g	1kg	900g

\* RAL 9016 equivalent

**ZS-2869**

**ZS-2852**



- Ceiling Mount Speaker is of all metallic construction and ideal for use in voice alarm system
- Spring clamp mechanism for easy speaker mounting to the ceiling
- The push-in type input terminal block makes cable connections easy and allows bridge wiring

Specification	ZS-2869	ZS-2852
Speaker Component	8"(20cm) double cone type	
Rated Input	6W(100V line)	15W(100V), 15W(70V)
Rated Impedance (100V line)	1.7kΩ(6W), 3.3kΩ(3W), 6.7kΩ(1.5W), 13kΩ(0.8W)	670Ω(15W), 1kΩ(10W), 2kΩ(5W), 3.3kΩ(3W)
Rated Impedance (70V line)	-	330Ω(15W), 670Ω(7.5W), 1kΩ(5W), 2kΩ(2.5W), 3.3kΩ(1.5W)
Sensitivity (1W,1m)	94dB	96dB
Frequency Response	40-20.000Hz	45-20.000Hz
Spring Mounting Method	Spring Clamp	
Finish	Baffle: Steel plate, off-white, paint; Grille: surface-treated steel plate net, offwhite, paint	
Dimension	$\phi 280 \times 92\text{mm}$	
Weight	1.4kg	1.6kg

## Wall Mount Speaker

### Wall Mount Speaker

**ZS-633AT**  
**ZS-633A**



**ZS-634T**



**ZS-1034**  
**ZS-1034S**



- Quick and easy installation
- Creates a distinctly different impression depending on whether it is installed horizontally or vertically

Specification	ZS-633AT	ZS-633A	ZS-634T	ZS-1034	ZS-1034S
Speaker Component	5"(12cm) cone-type			5"(12cm) cone-type, balanced dome tweeter	
Rated Input	6W(100V), 3W(70V)			10W(100V), 10W(70V)	
Rated Impedance (100V line)	1.7kΩ(6W), 3.3kΩ(3W)	1.7kΩ(6W), 3.3kΩ(3W), 10kΩ(1W)		1kΩ(10W), 2kΩ(5W), 3.3kΩ(3W), 10kΩ(0.5W)	
Rated Impedance (70V line)	1.7kΩ(3W), 3.3kΩ(1.5W)	1.7kΩ(3W), 3.3kΩ(1.5W), 10kΩ(0.5W)	1.7kΩ(3W)	500Ω(10W), 1kΩ(5W), 2kΩ(2.5W), 3.3kΩ(1.5W), 10kΩ(0.5W)	
Sensitivity (1W,1m)	91dB			90dB	
Frequency Response	120-15.000Hz		120-18.000Hz	120-20.000Hz	
Connection	Push-in connector			M4 Screw Terminal	
Finish	Case: ABS Resin, Off-white; Rear-Board: Hard Board			Enclosure: HIPS Resin, Off-white, Grille: Surface-treated steel plate net, off white, paint	
Dimension	173(W) x 195(H) x 101(D) in mm			210(W) x 330(H) x 80(D) in mm	
Weight	810g	780g	1.3kg	1.4kg	

**ZS-678**



- Compact and unobtrusive design
- Quick and easy installation
- High cost effectiveness
- A push-type input terminal allows easy cable connections and bridge wiring
- Ideally suited for BGM and announcements

**ZS-680F**

**ZS-680FC**



- Innovative design based on golden ratio (1:1.618)
- Quick and easy installation
- Strong-all metal body
- Horizontal/ vertical installation
- Ideally suited for voice alarm system application (ZS-680FC)
- Two steatite screw terminal blocks and thermal fuse
- EN 54-24 certified in 2010 (Certificate No: 1438/CPD/0178)

Specification	ZS-678	ZS-680	ZS-680FC
Speaker Component	6"(16cm) double cone-type		
Rated Input	6W(100V), 3W (70V)		
Rated Impedance (100V line)	1.7kΩ(6W), 3.3kΩ(3W), 6.7kΩ(1.5W), 13kΩ(0.8W)		
Rated Impedance (70V line)	1.7kΩ(3W), 3.3kΩ(1.5W), 6.7kΩ(0.8W), 13kΩ(0.4W)		
Frequency Response	150 - 20.000Hz		
Sound Pressure Level (1W/1m)	94dB		
Input Terminal	Push-in terminal		Screw Connector (Ceramic Terminal)
Finish	Baffle: HIPS resin, off-white. Cabinet: Wood, off-white. Grille: Surface-treated steel plate	Baffle: Steel Plate, off-white. Cabinet: Steel-plate, off-white. Grille: Surface-treated steel plate net, off-white	
Dimensions	250(W) x 190(H) x 110(D) in mm	310(W) x 190(H) x 87.2(D) in mm	
Weight	1.7kg	2.6kg	

## Pendant Speaker

### Pendant Speaker

#### ZS-PE304 / ZS-PE304BK



- Stylish and outstanding design inspired by the finest lighting fixtures
- Sturdy cable extendable up to 5 meters
- Paintable
- Input impedance easily changeable
- Ideally suited for BGM and announcement

Specification	ZS-PE304/BK
Enclosure	Bass-reflex type
Rated input	30W(100V, 70V line,8Ω)
Rated Impedance	100V line: 330Ω(30W), 500Ω(20W), 670Ω(15W), 1kΩ(10W), 2kΩ(5W) 70 V Line: 170Ω(30W), 250Ω(20W), 330Ω(15W), 500Ω(10W), 1kΩ(5W),8Ω
Sensitivity (1W/1m)	91dB (500Hz-5.000Hz, pink noise)
Frequency Response	70Hz-20.000Hz
Speaker Component	12cm cone-type
Speaker Cord	2-core cable cord 5m
Finish	Enclosure: HIPS resin, off-white / black. Grille: Surface-treated, steel
Dimensions	φ186 x 251mm
Weight	2.1kg



Application: Store, Coffee Shop, Cafe, Restaurant

### Box Speaker

#### ZS-062



- Wide-range paging speaker for voice paging, background music and tone signaling distribution

Specification	ZS-062
Rated input	6W
Impedance (100V line)	1.7kΩ (6W), 3.3kΩ (3W), 6.7kΩ (1.5W), 13kΩ (0.8W)
Frequency Response	100Hz - 12.000Hz
Sound Pressure Level (1W/1m)	90dB
Speaker Component	12cm Dynamic Speaker (rated impedance 8Ω)
Dimensions	290(W) x 214(H) x 150(D)in mm
Weight	2.1kg
Finish	Enclosure: Wood. Light Grey ; Grille: Cloth, Light Grey

## Wide Horn Speaker

### ZS-154

### ZS-254



- Wide-range paging speaker for voice paging, background music and tone signaling distribution
- Constant directivity horn improves directivity characteristics and ensure uniform and clear sound dispersion
- High sensitivity: up to 98dB(1W/1m)
- IP 65 certified weatherproof construction
- Weatherproof polyurethane resin paint and impact-proof lightweight ABS resin enclosure
- Stainless steel hardware protects the speaker from corrosion

Specification	ZS-154	ZS-254
Rated input	15W	25W
Rated Impedance	670Ω, 1kΩ, 2kΩ	400Ω, 500Ω, 1kΩ
Frequency Response	150Hz - 15.000Hz	120Hz-15.000Hz
Sound Pressure Level (1W/1m)	97dB	98dB
Speaker Component	12cm cone-type	
Finish	Horn, cover: ABS Resin, off-white, paint Bracket, screw: Stainless steel. Net: Aluminum, gray, paint	
Dimensions	366(W) x 230(H) x 272(D)in mm	
Weight	2.8kg	3.1kg

## Universal Speaker

### Universal Speaker

### ZS-1030B/W



Specification	ZS-1030B/W
Enclosure	2-way bass reflex type
Rated input	30W
Rated Impedance	8Ω 100V line: 330Ω(30W), 500Ω(20W), 670Ω(15W), 1kΩ(10W), 2kΩ(5W)
Frequency Response	70Hz - 20.000Hz
Sound Pressure Level (1W/1m)	90dB
Speaker Component	12cm cone-type + dome type
Speaker Cord	2-core cable cord with diameter of 6mm
Water Protection	IPX4
Finish	Enclosure: ABS resin, black or white, paint Net: Surface treated steel plate, black or white, powder coating Bracket: Surface treated steel plate, black or white, powder coating
Dimensions	196(W) x 290(H) x 150(D)in mm
Weight	2.5kg



## Variable Dispersion Speaker

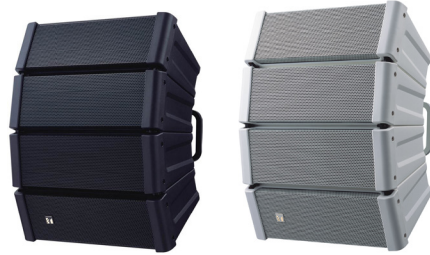
### Variable Dispersion Speaker

**Z-5B-HX2**

**Z-5W-HX2**

**Z-5BW-HX2**

**Z-5WW-HX2**



Specification	Z-5B/W-HX2	Z-5BW/WW-HX2
Enclosure	Bass Reflex Type	Sealed Type
Power Handling Capacity	Continuous : 200W, Program : 400W (IEC 60268-5)	
Rated Impedance	8Ω	
Sensitivity (1W/1m)	96dB (60° mode), 97dB (45° mode), 98dB (30° mode), 99dB (15° mode)*	
Frequency Response	70Hz - 20kHz (-10dB) (60° mode), 75Hz - 20kHz (-10dB) (45° mode), 80Hz - 20kHz (-10dB) (30° mode), 85Hz - 20kHz (-10dB) (15° mode)	95Hz - 20kHz (-10dB) (60° mode), 100Hz - 20kHz (-10dB) (45° mode), 105Hz - 20kHz (-10dB) (30° mode), 110Hz - 20kHz (-10dB) (15° mode)
Crossover Frequency	4kHz	
Directivity Angle	Horizontal: 100° (2kHz or more); Vertical: 60° (800Hz or more), 45° (1,2 kHz or more), 30° (1.6 kHz or more), 15° (3,2kHz or more) variable	
Speaker Component	Low Frequency: 12cm cone-type x 4, High Frequency: Balanced dome-type x 12	
Water Protection	-	IPX4 (Install with the every speaker module downward)
Operating Temperature	-	-15°C to +50°C
Finish	Enclosure: Polypropylene, black/white; Punched Net: Surface-treated steel plate, black/white	Enclosure: Polypropylene, black/white; Punched Net: Surface-treated steel plate, black/white, rust proof coating
Dimension	408(W) x 546(H) x 342(D) in mm	
Weight	16kg	
Accessories	Hanging bracket x 2, Hex Wrench x 1	

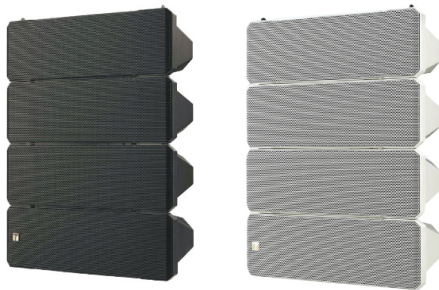
\* Factory-preset : 60°mode

**Z-7B-HX-AS**

**Z-7W-HX-AS**

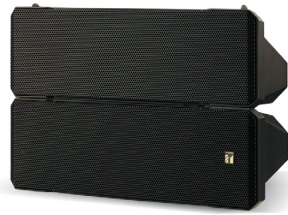
**Z-7BW-HX-AS**

**Z-7WW-HX-AS**



Specification	Z-7B/W-HX-AS	Z-7BW/WW-HX-AS
Enclosure	Bass Reflex Type	Sealed Type
Power Handling Capacity	Continuous pink noise : : 250W / ContinuousProgram : 750W	
Rated Impedance	8Ω	
Sensitivity (1W/1m)	100dB	
Frequency Response	75-20kHz	
Crossover Frequency	1.7kHz	
Directivity Angle	Horizontal : 100° ; Vertical : Depending on directivity angle mode	
Speaker Component	Low Frequency: 13cm (5.5") cone-type x 8, High Frequency: Wave front control horn with compression driver x 4	
Input Terminal	Speakon NL4MP x 2 and M4 screw terminal Distance between barriers: 9mm (0.35")	M4 screw terminal Distance between barriers: 9mm(0.35")
Water Protection	-	IPX4 (Install with the every speaker module tilted downward from the horizontal)
Finish	Enclosure: Polypropylene, black or white. Punched Net: Surface-treated steel plate, black/white, paint. Hanging bracket: steel plate, t3.0, black/white, paint	Enclosure: Polypropylene, black or white. Punched Net : Surface-treated steel plate, black/ white, rust proof coating
Dimension	497(W) x 664(H) x 274(D) mm	
Weight	30kg	
Accessories	Hanging bracket, L, R (L and R are symmetrical to each other) x 1, Hanging bracket mounting bolt x 4	Terminal cover x 1, Terminal cover mounting screw x 4, Rubber Packing x 1

## Z-7B-HX-2M



Specification	Z-7B-HX-2M
Enclosure	Bass Reflex Type
Power Handling Capacity	Continuous pink noise: 125W (IEC60268-5: 350 W) / Continuous program: 375 W
Rated Impedance	16Ω
Sensitivity (1W/2m)	93dB
Frequency Response	75-20kHz
Crossover Frequency	1.7kHz
Directivity Angle	Vertical : Depending on directivity angle mode
Speaker Component	Low frequency: 13cm cone-type x 4 High frequency: Wave front control horn with compression driver x 2
Input Terminal	Speakon NL4MP x 2
Finish	Enclosure: Polypropylene, black Punched net: Surface-treated steel plate, black, paint
Dimension	497(W) x 345(H) x 274(D) mm
Weight	16kg

### Line Array Speaker

- Powerful 2-way modular speaker units
- High Power Handling - Low: 600W, High: 240W
- Phase wave front control technology for high-frequency sound range that is attenuation-free and high fidelity
- Adjustable sound coverage by connecting a number of speakers and combining speakers with different dispersion angle
- Simple maintenance – complete driver replacement is possible from the speaker's rear
- Splash-proof version (IPX4)

## Z-SRX12L-AS



## Z-SRX12S-AS



Specification	Z-SRX12L-AS	Z-SRX12S-AS
Enclosure		Bass-reflex type
Power Handling Capacity		Continuous program Low frequency: 600 W, High frequency: 240 W
Rated Impedance		Low frequency: 8Ω, High frequency: 16Ω
Sensitivity		Low frequency: 98 dB (1 W, 1 m), High frequency: 110 dB (1 W, 1 m)
Frequency Response		50 Hz – 20 kHz (when recommended parameters are applied by the optional DP-SP3)
Crossover Frequency		1 kHz (when recommended parameters are applied by the optional DP-SP3)
Directivity Angle	Horizontal: 90°, Vertical: 5°	Horizontal: 90°, Vertical: 15°
Speaker Component	Low frequency: 30 cm cone-type High frequency: Wave front control horn 90° (horizontal) x 5° (Vertical) + compression driver x 2	Low frequency: 30 cm cone-type High frequency: Wave front control horn 90° (horizontal) x 15° (Vertical) + compression driver x 2
Connected Cable		Direct cable withdrawal from internal speaker: Ø8.6 mm, Conductor cross section: 1.25 mm <sup>2</sup> , 4-core cable, 3 m
Operating Temperature		-10 °C to +50 °C
Water Protection		IPX4
Finish		Enclosure: Wood, black, urethane coating Front grille: Punched stainless steel, black, paint
Dimension	740 (W) x 433 (H) x 469 (D) mm (excluding connected cable)	740 (W) x 433 (H) x 467 (D) mm (excluding connected cable)
Weight		55 kg (including accessories)
Accessory		Joint plate ...2, Joint plate mounting bolt (M10) ...16
Option		Ringging frame: SR-RF12WP Digital speaker processor: DP-SP3

## Z-SRX18B-AS



Specification	Z-SRX18B-AS
Enclosure	Bass-reflex type
Power Handling Capacity	Continuous program: 900 W
Rated Impedance	8Ω
Sensitivity	95 dB (1 W, 1 m)
Frequency Response	40 – 400 Hz (when recommended parameters are applied by the optional DP-SP3)
Crossover Frequency	80 Hz (when recommended parameters are applied by the optional DP-SP3)
Speaker Component	46 cm cone-type
Input Connector	M4 screw terminal, distance between barriers: 10mm And Neutrik NL4MPXX × 2
Finish	Enclosure: Wood, black, urethane coating Front grille: Punched steel plate, black, paint
Dimension	740 (W) × 573 (H) × 698 (D) mm
Weight	84 kg (including accessories)
Accessory	Joint plate ×2, Joint plate mounting bolt (M10) ×16
Option	Ringging frame: SR-RF12 Digital speaker processor: DP-SP3



## 2-Way Weatherproof Loudspeaker System

### 2-Way Weatherproof Loudspeaker System

#### ZS-760B-AS

#### ZS-760W-AS



- Highly intelligible ; suited to voice alarm, public address and BGM application by 2-way speaker system.
- IP 66 certified : All weather durability, be it water or dust.
- Ideal for any fully outdoor applications
- Special pain coat prevents color degradation, ensuring long-lasting exterior condition
- Rotary switch facilitates hassle-free impedance change

Specification	ZS-760B-AS	ZS-760W-AS
Rated Input	60W (high impedance)	
Rated Impedance	100V Line: 170 Ω (60 W), 330 Ω (30 W), 670 Ω (15 W), 1.3kΩ (7.5 W) 70V Line: 83 Ω (60 W), 170 Ω (30 W), 330 Ω (15 W), 670 Ω (7.5 W)	
Sensitivity (1W, 1m)	100dB	
Maximum SPL (60W,1m)	117dB	
Frequency Response	100Hz - 20kHz	
Crossover Frequency	2.5kHz	
Directivity Angle	Horizontal : 90° ; Vertical : 80°	
Speaker Component	Low Frequency : 16cm (6") cone-type High Frequency : 2.5cm (1") dome tweeter	
Dust/Water Protection	IP66	
Connection	Speaker cord (Hot: Black ; Corn: White)	
Finish	Enclosure: ABS, Black, Paint Coating Punched Net: Surface-treated Steel Plate, Black, Paint Coating Bracket: Stainless Steel, Black, Powder Coating	Enclosure: ABS, White, Paint Coating Punched Net: Surface-treated Steel Plate, White, Paint Coating Bracket: Stainless Steel, White, Powder Coating
Dimensions	388(W) x 310(H) x 367(D)mm	
Weight	7.4kg	

### Subwoofer

#### Z-120BFB

#### Z-FB152B-AS



Specification	Z-120BFB	Z-FB152B-AS
Power Handling Capacity	Continuous pink noise: 200W, Continuous program: 600W	Continuous pink noise: 300W, Continuous program: 900W
Sound Pressure Level (1W/1m)	90dB	91dB
Rated Impedance	8Ω	
Frequency Response	40 - 1.200Hz (-10dB)	40-400Hz (-10dB)
Speaker Component	30cm cone-type	38cm cone-type
Input Terminal	Speakon NL4MP x 2 and M4 screw terminal, distance between barriers:11mm	Speakon NL4MP x 2 and M4 screw terminal
Finish	Enclosure: Plywood. Punched Net: Steel plate, black paint	Enclosure: MDF, black or white, urethane paint. Punched Net: Surface-steel plate, black, paint
Dimensions	408(W) x 408(H) x 450(D)mm	505(W) x 530(H) x 655(D)mm
Weight	15kg	35kg

## Speaker System

### ZS-FBOX Series



The Z-F BOX Series is a premium line of high-performance surface-mount box speakers designed to elevate your audio experience. Featuring our proprietary speaker units, these speakers deliver exceptional sound quality, sleek aesthetics, and effortless installation. With a variety of options, including 3.5-inch full-range speakers, 5-inch and 8-inch two-way speakers, and 8-inch subwoofers, the ZS-F BOX Series is the perfect choice for any commercial or professional audio application.

**ZS-F03BT-AS**  
3.5-inch  
full-range speaker



**ZS-F05BT-AS**  
5-inch 2-way speaker



Specification	ZS-F03BT-AS	ZS-F05BT-AS
Enclosure	Bass-reflex type	
Power Handling Capacity (*1)	Rated noise power: 30 W (8 Ω) Continuous program: 60 W (8 Ω)	Rated noise power: 60 W (8 Ω) Continuous program: 120 W (8 Ω)
Rated Input	15 W (100 V line, 70 V line)	
Rated Impedance	8 Ω 100 V line: 670 Ω (15 W), 2 kΩ (5 W), 3.3 kΩ (3 W), 10 kΩ (1 W) 70 V line: 330 Ω (15 W), 670 Ω (7.5 W), 2 kΩ (2.5 W), 3.3 kΩ (1.5 W), 10 kΩ (0.5 W)	8 Ω 100 V line: 330 Ω (30 W), 1 kΩ (10 W), 3.3 kΩ (3 W), 10 kΩ (1 W) 70 V line: 170 Ω (30 W), 330 Ω (15 W), 1 kΩ (5 W), 3.3 kΩ (1.5 W), 10 kΩ (0.5 W)
Sensitivity	87 dB (1 W, 1 m) at installation in 1/2 free sound field	
Frequency Response	85 Hz - 20 kHz, -10 dB at installation in 1/2 free sound field	
Crossover Frequency	-	
Directivity Angle	Horizontal: 100°, Vertical: 100°	
Speaker Component	9 cm (3.5") Full-range PPcone-type	Low frequency: 13 cm (5") PPcone-type High frequency: 25 mm (1") dome tweeter
Input Terminal	Push-in terminal	
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)	
Installation Environment	Indoor installation	
Finish	Enclosure: HIPS, black (RAL 9011 equivalent), paint Grille: Steel plate, black (RAL 9011 equivalent), paint Speaker bracket: Die-cast aluminum, black (RAL 9011 equivalent), paint Base bracket: Steel plate, t4, black (RAL 9011 equivalent), paint Base bracket cover: HIPS, black (RAL 9011 equivalent), paint	
Dimensions	130 (W) X 221 (H) X 132 (D) mm	162 (W) X 274 (H) X 164 (D) mm
Weight	1.7kg	2.7kg
Accessory	Speaker bracket ...1, Base bracket ...1, Base bracket cover ...1, Bracket fixing screw ...1 set	

(\*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.  
Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.



Office, Retail Store, School, Buildings, Public Area, House of Worship

**ZS-F08BT-AS****8-inch** 2-way speaker

Specification	ZS-F08BT-AS
Enclosure	Bass-reflex type
Power Handling Capacity (*1)	Rated noise power: 90 W (8 Ω) Continuous program: 180 W (8 Ω)
Rated Input	60 W (100 V line, 70 V line)
Rated Impedance	8 Ω 100 V line: 170 Ω (60 W), 330 Ω (30 W), 670 Ω (15 W), 3.3 kΩ (3 W) 70 V line: 83 Ω (60 W), 170 Ω (30 W), 330 Ω (15 W), 670 Ω (7.5 W), 3.3 kΩ (1.5 W)
Sensitivity	91 dB (1 W, 1 m) at installation in 1/2 free sound field
Frequency Response	50 Hz - 20 kHz, -10 dB at installation in 1/2 free sound field
Crossover Frequency	3kHz
Directivity Angle	Horizontal: 100°, Vertical: 100°
Speaker Component	Low frequency: 20 cm ( 8" ) PPcone-type High frequency: 25 mm (1") dome tweeter
Input Terminal	Push-in terminal
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Installation Environment	Indoor installation
Finish	Enclosure: HIPS, black (RAL 9011 equivalent), paint Grille: Steel plate, black (RAL 9011 equivalent), paint Speaker bracket: Die-cast aluminum, black (RAL 9011 equivalent), paint Base bracket: Steel plate, t.4.5, black (RAL 9011 equivalent), paint Base bracket cover: HIPS, black (RAL 9011 equivalent), paint
Dimensions	251 (W) X 392 (H) X 216(D) mm
Weight	5.2kg
Accessory	Speaker bracket ...1, Base bracket ...1, Base bracket cover ...1, Bracket fixing screw ...1 set

(\*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.  
Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.

**ZS-FB08B-AS****8-inch** subwoofer

Specification	ZS-F08B-AS
Enclosure	Bass-reflex type
Power Handling Capacity (*1)	Rated noise power: 120 W (8 Ω) Continuous program: 240 W (8 Ω)
Rated Input	120 W (100 V line, 70 V line)
Rated Impedance	8 Ω 100 V line: 83 Ω (120 W), 167 Ω (60 W) 70 V line: 50 Ω (100 W), 83 Ω (60 W), 167 Ω (30 W)
Sensitivity	84 dB (1 W, 1 m) at installation in free sound field; 90 dB (1 W, 1 m) at installation in 1/2 free sound field
Frequency Response	45 Hz - 300 Hz, -10 dB at installation in 1/2 free sound field
Speaker Component	20 cm (8") cone-type
Input Terminal	M4 screw terminal, distance between barriers: 9 mm ( 0.35")
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Installation Environment	Indoor installation
Recommended Amplifiers(*2)	DA-250H, DA-250FH, DA-500FH, A-5012
Finish	Enclosure: MDF, black (RAL 9011 equivalent), paint Grille: Surface treated steel plate, black (RAL 9011 equivalent), paint
Dimensions	200 (W) X 350 (H) X 400 (D) mm
Weight	16kg
Accessory	Speaker bracket ...1, Base bracket ...1, Base bracket cover ...1, Bracket fixing screw ...1 set

(\*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.  
Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.

## Speaker System

### ZS-FBOX Series



### ZS-BM800-AS

8-inch 2-way speaker



Specification	ZS-BM800-AS
Enclosure	Bass-reflex type
Rated Input	60 W (100 V line)
Rated Impedance	100 V line: 170 Ω (60 W), 330 Ω (30 W), 670 Ω (15 W), 3.3 kΩ (3 W)
Sensitivity	91 dB (1 W, 1 m) at installation in 1/2 free sound field
Frequency Response	70 Hz - 20 kHz, -10 dB at installation in 1/2 free sound field
Crossover Frequency	3kHz
Directivity Angle	Horizontal: 100°, Vertical: 100°
Speaker Component	Low frequency: 20 cm ( 8") PPcone-type High frequency: 25 mm (1") dome tweeter
Input Terminal	Push-in terminal
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Installation Environment	Indoor installation
Finish	Enclosure: HIPS, black Grille: Steel plate, black (RAL 9011 equivalent), paint Speaker bracket: Die-cast aluminum, black (RAL 9011 equivalent), paint Base bracket: Steel plate, t.4.5, black (RAL 9011 equivalent), paint Base bracket cover: HIPS, black (RAL 9011 equivalent), paint
Dimensions	251 (W) X 392 (H) X 216(D) mm
Weight	5.2kg
Accessory	Speaker bracket ...1, Base bracket ...1, Base bracket cover ...1, Bracket fixing screw ...1 set

(\*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.  
Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.

**Ceiling Subwoofer**

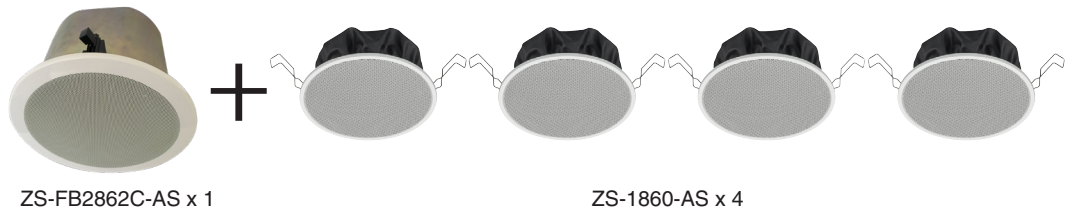
**ZS-FB2862C-AS**



Specification	ZS-FB2862C-AS
Enclosure	Bass Reflex Type
Rated Input	120W (High Impedance)
Rated Output	AC: 30W; DC: 10W
Power Handling Capacity	Continuous: 60W(8Ω) (IEC6026-5)   Program 120W(8Ω)
Rated Impedance	8Ω / 100V Line: 83Ω (120W), 170Ω(60W), 330Ω(30W), 670Ω(15W), 3.3kΩ(3W)
Sound Pressure Level (1W/1m)	87dB, installation in 1/2 free sound field. (Measured by installing the unit in the center of the ceiling or wall) 81dB(1W,1m) installation in free sound field. (Measured in anechoic chamber)
Frequency Response	60-250Hz(-10dB) installation in free sound field. (Measured by installing the unit in the center of a ceiling or wall)
Speaker Component	Low Frequency: 16cm cone-type
Mounting Hole	φ 250mm(Maximum ceiling thickness: 37mm)
Input Terminal	Removable locking connector with screw-down terminals ( 2 input terminals and 2 bridge terminals)
Usable Cable	Solid cooper wire: φ 0.5 - φ 1.6mm (equivalent to AWG No.24-14) Stranded cooper wire: 0.2 - 2.5mm <sup>2</sup> (equivalent to AWG No.24-14)
Finish	Enclosure: Steel plate, plating Baffle: Fire Resistant ABS resin (UL-94-V-0), black Rim: Fire-resistant ABS resin (UL-94 V-0), white (RAL 9016) Punched Net: Steel Plate, white (RAL 9016), paint
Dimension	φ 280 x 198(D) in mm
Weight	6.3kg (including mounting accessory)
Accessories	Grille x 1, Ceiling reinforcement x 1, Safety wire x 1, Paper pattern x 1

\*0dB: 1V

**Recommended System Set:**



# Microphone

## Unidirectional Microphone



[a,b,c]

- Reproduce high sound clarity for use with other sound system equipment
- Cable can be detached for easy storage

[d]

- Consist of a magnetic switch by reduce noise caused by switch contact

Specification	ZM-260	ZM-320	ZM-420	ZM-520
Type	Dynamic Microphone			
Directivity	Unidirectional			
Rated Impedance	600Ω			
Rated Sensitivity	-75dB ± 3dB(at 1kHz)	-76dB ±3dB(at 1kHz)	-72dB ±3dB(at 1kHz)	-70dB ±3dB(at 1kHz)
Frequency Response	100Hz - 12kHz		80Hz - 13kHz	50Hz - 16kHz
Switch	Short-Off Circuit type, slide switch			Short-Off Circuit type, Magnetic slide switch
Dimensions	φ55 x 178mm	φ52 x 183mm		φ50 x 176mm
Weight (without cable)	420g	304g	280g	232g
Color	Black	Metalic Dark Gray	Grille: Silver; Body : Metalic Dark Gray	Metalic Dark Gray
Accessories	Microphone Holder (W5/16" 18threads)			
Connection Cable	φ5mm x 7.5m, 1- core shielded cable (unbalanced), 3P XLR typeconnector to phone plug		φ 6mm x 7.5m, 1- core shielded cable (unbalanced), 3P XLR type connector to phone plug	

## Unidirectional Microphone

### ZM-270



- Special coating on microphone
- body for a non-slip grip

Specification	ZM-270
Type	Moving Coil Microphone
Directivity	Unidirectional
Rated Impedance	600Ω, Balanced
Sensitivity	-52dB (1kHz, 0dB = 1V/PA)
Frequency Response	100Hz - 15kHz
Dimensions	47(φ)x 175D) in mm
Weight	300g (without connection cable)
Talk Switch	Short-Off, slide switch
Finish	Body: Zinc die cast, painted black rubber; Head: Steel wire, painted black
Accessories	Microphone Holder (W5/16" 18 threads)
Connection Cable	5m

## Tie Clip Microphone

### ZM-361-AS



- Compact electret condenser microphone element
- Design for best performance & convenience
- Allowing easy microphone position adjustment

Specification	ZM-361-AS
Type	Electret Condenser Microphone
Directivity	Unidirectional
Rated Impedance	2kΩ, Unbalanced
Sensitivity	-35dB (1kHz, 0dB = 1V/PA)
Frequency Response	100Hz - 18kHz
Cable Length	7m
Connector Output	1/4" Unbalanced Phone Plug 6.3
Finish	Case: ABS,Black
Dimensions	89.5(W)x 38(H) x 19(D) in mm (microphone body)
Weight	153g (without battery)
Power Source	1Pc x 1.5V "AA" (R6S or UM-3U)

## Neck Worn Microphone

### ZM-362-AS



- Design exclusively for leader prayer in mosque and other applications where constant body movement is unavoidable
- Equipped with an optional power that is selectable between battery and phantom power
- Allowing easy microphone position adjustment

Specification	ZM-362-AS
Power Source	3V DC (2 x "AAA" batteries) or Phantom Power : 9 ~ 52V
Microphone Element	Electret Condenser
Polar Pattern	Cardioid
Rated Impedance	600Ω, Balanced
Rated Sensitivity	-35dB, ±3dB (1kHz 0dB = 1V/Pa)
Frequency Response	60Hz - 20kHz
Connector Output	1/4" Balanced L Plug, 200mm
Cable Length	7m
Finish	Battery case unit, switch unit, mic unit : ABS resin, Black Flexible Shaft : Cooper Alloy, Black, Paint, Shield Tube Wire Hanger : Steel wire shield rubber, Black, Paint
Dimensions	260(H) x 135(W)mm
Weight	190g (exclude batteries)

### ZM-222



Specification	ZM-222
Type	Moving Coil Microphone
Directivity	Unidirectional
Rated Impedance	600Ω, Unbalanced
Rated Sensitivity	-47dB (1kHz, 0dB = 1V/PA)
Frequency Response	100Hz - 10kHz
Cable	1-core shielded cable
Cable Length	2m (when extended)
Terminal	Phone Plug
Talk Switch	Short-off type with lock
Finish	ABS resin, gray
Weight	200g
Accessories	Microphone Holder x 1, Metal Fitting x 1, Tapping Screw (4x16) x 2

## Headset Microphone

### ZM-371HS-AS



Specification	ZM-371HS-AS
Type	Electret Condenser Microphone
Directivity	Unidirectional
Rated Impedance	5.6kΩ, Unbalanced
Rated Sensitivity	-37dB, ±3dB (1kHz, 0dB = 1V/PA)
Frequency Response	100Hz - 20.000Hz
Cable Length	10m
Connector	1/4" unbalanced phone Jack
Finish	Battery case : ABS, Black; Headset : Metal Black
Weight	154g (without battery)
Battery	1pc x AA (R6S or UM-3U)

## Chime Microphone

### ZM-380-AS

### ZM-380C-AS



Specification	ZM-380-AS	ZM-380C-AS
Element	Condenser Microphone	Condenser Microphone (with 4- Tones Chime(Up/Down))
Polar Pattern	Cardioid	
Rated Impedance	750Ω, Balanced	600Ω, Balanced
Rated Sensitivity	-39dB ±1dB (1kHz, 0dB = 1V/Pa)	-41dB ±3dB (1kHz, 0dB = 1V/Pa)
Frequency Response	50-16kHz	50-18kHz
Output Connector	XLR-3-32 Equivalent	XLR-3-32 Equivalent RJ45 : Audio output, power supply, contact output
Operating Temperature	0°C to - 40°C	
Finish	Stand Mic : ABS Resin, Black, Paint Mic Shaft : Copper Alloy, Black, Paint	
Dimension	110(W) x 145(L) x 532(H) in mm	
Weight	550g (excludes batteries)	558g (excludes batteries)
Accessories	Windscreen...1 ; XLR to phone jack cable (7.5m)...1	Windscreen...1 ; XLR cable stereo phone plug (7.5m)...1

## ■ Paging Microphone

### ZM-660D/P



Specification	ZM-660D	ZM-660P
Type	Moving Coil Microphone	
Directivity	Unidirectional	
Rated Impedance	600Ω, Balanced	600Ω, Unbalanced
Rated Sensitivity	-58dB (1kHz, 0dB = 1V/Pa)	
Frequency Response	100Hz -10kHz	
Remote Control	500mA or less at 30V DC	
Output	φ 5.0 (φ 0.2"), 4 -conductor cable (2-shielded) cable (2.5m (98.43") with 5 Pin Din plug	φ 4.5 (φ 0.18"), 2 -conductor cable (1-shielded) cable (2.5m (98.43") with Mono phone plug
Talk Switch	1-push to talk switch, 1 locking lever, short-off type	
Finish	Microphone-Head : Zinc plated steel wire, gray paint Microphone-Body : ABS Resin, gray	
Dimension	100(W) x 215(H) x 150(D) in mm	
Weight	440g (cord excluded)	

## ■ Condenser Microphone

### ZM-300-AS



Specification	ZM-300-AS
Power Source	AA (R6S or UM-3U) battery x 1pc (1.5VDC)
Type	Electret Condenser Microphone
Polar Pattern	Hyper Cardioid
Rated Impedance	2200Ω (at 1kHz), Unbalanced
Sensitivity	-49dB (1kHz, 0dB = 1V/Pa)
Frequency Response	50Hz -18kHz
Cable Microphone	φ 6.0mm x 7500mm, 1 - core shielded cable
Finish	Microphone Head : Metal Net, Light Black (leather paint) Microphone Body : Zinc diecast, Light Black (leather paint)
Connector	XLR Type female with 1/4" (6.3mm) phone plug
Talk Switch	Short-off, slide switch
Dimension	φ49(W) x 181(H) mm (microphone body)
Weight	254g (microphone only)
Accessories	Cable Microphone (7.5m)...1

## Megaphone

### ■ Hand Grip Megaphones

#### ZR-510

#### ZR-510S



- Anti-bacterial treatment for all models (mouth/ microphone and handle)
- High durable ABS or ASA resin construction
- Wide frequency range for enhanced audio quality
- Polyimide speaker diaphragms
- Long-lasting battery life
- Compact and lightweight
- Neodymium magnets for high audio performance
- Extended audible range

Specification	ZR-510	ZR-510S
Rated Output	6W	
Power Source	12V DC R6P (SUM-3)/ "AA" Batteries 8pcs	
Audible Range	Approx.250m	Talk: Approx.250m, Siren: Approx.315m
Outer Horn Diameter	160mm	
Length	260mm	
Weight	620g	
Color	Off-White and gray	Red

### ■ Hand Grip Megaphones

#### ZR-1015

#### ZR-1015S



Specification	ZR-1015	ZR-1015S
Rated Output	15W	
Power Source	R14P (C) x 6 (9V DC)	
Battery Life	Approx.14 hours	
Audible Range	Approx.315m	Talk: Approx.315m, Siren: Approx.500m
Weight	970g (without batteries)	980g
Dimensions	210(W) x 291(H) x 319(D)mm	210(W) x 291(H) x 319(D)mm (when attaching the mic)
Color	Off-White and light blue	Red

## Hand Grip Megaphones

### ZR-3215 / ZR-3215S



### ZR-2230W



### ZR-2930W



Specification	ZR-3215	ZR-3215S (with Siren)	ZS-2230W	ZR-2930W
Rated Output	15W		30W	
Power Source	9V DC R14P Batteries 6pcs		15V DC R20P Batteries 10pcs	
Battery Life	Approx.9 hours(JEITA)*	Approx.9 hours(JEITA)* Siren: Approx. 20 min (JEITA)*	Voice: Approx.17hours(JEITA)*, Whistle: Approx.90min(JEITA)*	
Audible Range	Approx.400m (JEITA)*	Approx.400m (JEITA)* Siren: Approx. 500m (JEITA)*	Voice: Approx.800m(JEITA)*, Whistle: Approx.1.000m(JEITA)*	
Receiving Frequency	-	-	-	UHF (800Mhz band) ; VHF (200MHz band)
Antenna	-	-	-	Fold-down flexible antenna
Dimensions	210(W) x 291(H) x 381(D)mm when attaching the mic			φ351 x 512mm
Weight	Body: 1.15kg (without batteries and microphone); microphone:150g		3.6kg(without batteries); microphone:150g	3.8kg(without batteries); microphone:150g
Finish	Horn: ABS Resin, light gray; Mouth,handle,batt.case: ABS resin, gray Strap : Nylon, black		Horn ring: Vinyl chloride, gray; Horn: Aluminum, light gray, paint; Case Top: Die-cast aluminum,gray, paint; Strap: Nylon, black	
Option	-		Speaker Stand : ST-16; Microphone: ZM Series	Speaker Stand: ST-16; Microphone: ZM-Series; Wireless Microphone: WM-5000Series; Wireless Tuner: WTU-4800

\*JEITA : Japan electronics and information technology industries association

## Shoulder Megaphones

### ZR-2015

### ZR-2015S



Specification	ZR-2015	ZR-2015S
Rated Output	15W	
Power Source	9V DC R14P (SUM-2)/ "C" Batteries 6pcs	
Audible Range	Approx.400m	Talk: Approx.400m, Siren: Approx.500m
Sirene Mode	-	Push to Talk, override the sirene signal
Outer Horn Diameter	210mm	
Length	310mm	
Weight	970g	980g
Microphone Weight	130g (cable excluded)	
Color	Off-White	

## Accessories

### Matching Transformer

#### ZT-351



Specification	ZT-351
Impedance (Input Power)	Primary: Com, 10W, 15W, 20W, 25W Secondary: Com, 4Ω,8Ω, or 16Ω
Frequency Response	100-6.000Hz
Dimension	168(W) x 102(H) x 96(D) in mm
Weight	2kg

### Attenuator

#### ZV-064

#### ZV-303

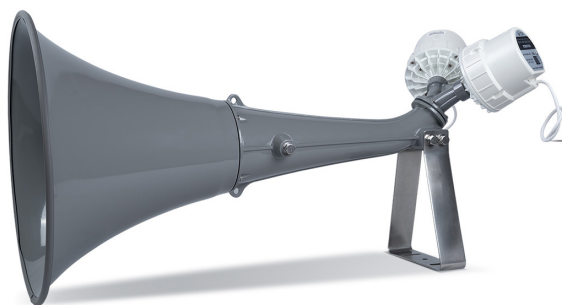


Specification	ZV-064	ZV-303
Input Capacity	6W	30W
Level Control	4 step; 0(OFF), 1, 2, 3	
Color	ABS Resin Off-white, Printing : Dark Grey	
Dimension	70(W) x 120(H) x 59(D)	
Weight	190g	

## Straight Horn



### Z-DH502-AS



- Z-DH502-AS features a long horn which permits sounds to easily pass through and is ideal for providing public address information
- Designed to be used in conjunction with 2 driver units.
- Z-DH502-AS has an internal bird protector net to prevent insects and birds from getting into the unit.

Specification	Z-DH502-AS
Applicable Drivers	ZH-662D (MD)
Sound Pressure Level	110 dB (1 W, 1 m) (when operated with drivers)
Frequency Response	200 Hz – 8 kHz (when the ZH-662D (MD) unit is used)
Driver Coupling Adapter	1 – 3/8 18 threads (inch screw)
Variable Installation Angle	Hor. : +15°, -15° ; Ver. : +15°, -15° (when locally procured mounting bracket is used)
IP rating	IP65 for Drivers (When be installed to Horn) *
Finish	Bell, Horn B and Adapter Y-Shaped : Aluminum, Grey, Powder coating Mounting Braket : Stainless Steel, Natural
Dimensions	Ø500 X 846 (D) mm (Ø19.69" X 33.31")
Weight	5.7 kg (12.57 lb)
Accessories	BH Screw M5x15 SUS 3-SEM ...4 pcs, Rubber Gasket ...1 pcs

\*Tentative value



### ZH-662D/MD-AS (Driver Unit)

Specification	ZH-662D-AS	ZH-662MD-AS (with transformer)
Rated Input		60W
Rated impedance	16Ω	100V line: 170Ω (60W), 330Ω (30W), 670Ω (15W)
Output Sound Pressure Level	110dB (1W,1m) (When operated with JIS C 5504 standard horn)	
Frequency Response	150 - 8000Hz (When operated with JIS C 5504 standard horn)	
IP Code	IP 65 (When a driver is operated with a horn)	
Horn Coupling	1 - 3/8" -18 threads (inch screw)	
Polarity	Hot: Black ; Com: White	
Finish	Upper Cover: Aluminum, white, powder coating Unit case : HIPS, white Screw : Stainless Steel Speaker Cable : Polyvinyl chloride insulated cabtyre cable 6mm (0.24") in diameter, 450mm (17.72") in length, white	
Dimensions	Ø139 X 108 (D) mm (Ø5.47" X 4.25")	Ø139 X 151 (D) mm (Ø5.47" X 5.94")
Weight	2kg (4.41lb)	2.7kg (5.95lb)



# Long Range Horn Array Speaker



- Z-HA Series-AS
- Z-HA1060-AS



Z-HA2240-AS



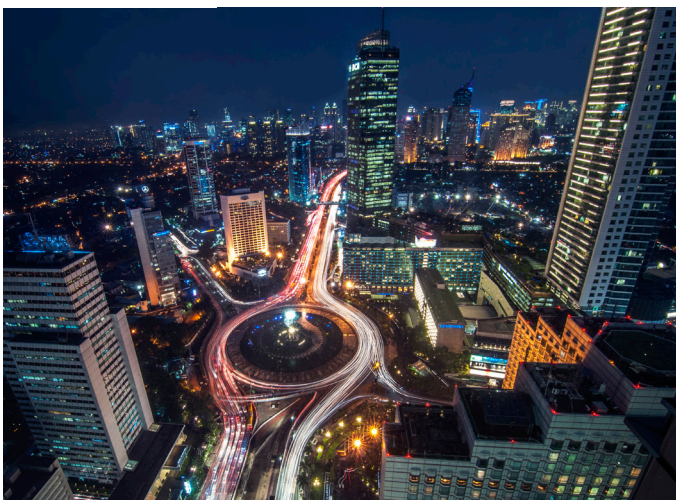
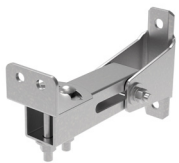
- Horn array for clear long-range voice projection
- IP66-rated for harsh outdoor use
- Weatherproof durability with double drip-proof design
- Wide horizontal coverage for broad-area public address applications
- Built-in high-pass filter for speaker protection

Specification	Z-HA1060-AS	Z-HA2240-AS
Rated Input	60W	240W
Rated Impedance	100 V line: 170 Ω (60 W), 330 Ω (30 W) 70 V line: 83 Ω (60 W), 170 Ω (30 W)	100 V line: 42 Ω (240 W), 83 Ω (120 W) 70 V line: 21 Ω (240 W), 42 Ω (120 W)
Sensitivity	111 dB (1 W, 1 m) (500 Hz - 5 kHz, IEC60268-5)	115 dB (1 W, 1 m) (500 Hz - 5 kHz, IEC60268-5)
Max.SPL	128 dB (60 W, 1 m) (500 Hz - 5 kHz, IEC60268-5)	138 dB (240 W, 1 m) (500 Hz - 5 kHz, IEC60268-5)
Frequency Response	520 Hz - 4.6 kHz (-10 dB), 350 Hz - 11 kHz (-20 dB)	490 Hz - 4.2 kHz (-10 dB), 280 Hz - 8 kHz (-20 dB)
Speaker Component	Horn speaker unit X 8	Horn speaker unit X 6
Operating Temperature	-20 °C to +55 °C (-4 °F to 131 °F)	
Dust / Water Protection	IP66	
Finish	Case: Aluminum, white (RAL 9016 equivalent), salt-resistant, paint; Front grille: Aluminum, white (RAL 9016 equivalent), paint, Bolts: Stainless steel	Case: FRP, white (RAL 9016 equivalent), paint Front grille: Aluminum, white (RAL 9016 equivalent), paint, Bolts: Stainless steel
Dimension	167 (W) X 1233 (H) X 140.5 (D) mm (6.57" X 48.54" X 5.53")(excluding projection)	215 (W) X 1110 (H) X 309 (D) mm (8.46" X 43.7" X 12.17") (excluding projection)
Weight	14 kg (30.86 lb) (unit only)	33 kg (72.75 lb) (unit only)
Option	Speaker mounting bracket: YS-1100A	

Notes: The speaker must be installed upright or facing down. Installing the speaker in any other position may render the drainage hole ineffective, eventually leading to an electrical failure or other damage.

## Optional Accessory

The YS-1100A speaker mounting bracket is necessary for installing the speakers on a wall or a pole.



## Wall-Mount Voice Evacuation System

### Z-FV2148W-AS



- Compact, all in one
- Build-in 4 - emergency message, link with fire alarm panel
- 10 speaker zones, 480W rated output
- Connect up to 4x RM-200M remote microphones

Z-FV2148W-AS	
Power Source	100 - 240 V AC, 50/60 Hz, M4 Screw Terminal
Power Consumption	99 W (EN 62368-1) 530W (Rated Output)
Rated Output	480W
Input	Front Microphone : -60dB*, 2.2kΩ, unbalanced, XLR connector Input 1 : -60dB*/ -20dB* (selectable), 2.2kΩ, balanced, screw terminal Phone jack priority (if connected to phone jack, voice change automatically) Input 2 : -20dB*, 10kΩ, balanced, screw terminal MP3: LED Display, Support USB, SD/MMC Card (up to 32GB), Bluetooth, Radio FM
Remote Microphone	Usable Remote Microphone : RM-200M Max 4 unit, RJ45 Maximum Cable Distance: Total 800M
Output	Speaker Output : Screw Terminal Speaker Selector : 10 Zones, high impedance (100V line) individual selector, group
S/N Ratio	Over 60dB
Total Harmonic Distortion	Under 1% at 1kHz, 1/3 rated power
Frequency Response	50Hz - 20000Hz
Tone Control	Bass : ± 10dB at 100Hz ; Treble : ± 10dB at 10kHz
Emergency Announcement	Alert, Evacuation, False, Clear (repeated continuously / one time, selectable)
Built-in Chime	2 Chimes
Control Input	FA IN : No-voltage make contact input, open voltage: 24V DC, short-circuit current: under 5mA, screw terminal CTRL IN 1-6 : No-voltage make contact input, open voltage: 24V DC, short-circuit current: under 5mA, screw terminal (assignable)
Control Output	FA OUT : Relay contact output, rated voltage: 24V DC, screw terminal CTRL OUT 1 - 2 : Relay contact output, rated voltage: 24V DC, screw terminal (assignable)
Indicator	Power, Signal, Peak, Fault, Each of Zone, All Zone, Alert, Evacuation, False, Clear
Operating Temperature	0°C to + 40°C
Operating Humidity	Under 90% RH (no condensation)
Ventilation	Fan Cooling
Finish	Steel Plate, Black , Paint
Dimensions	370 (W) x 456(H) x 132 (D) mm
Weight	9.2kg
Accessories	Front Microphone....1, Paper Pattern....1



## Emergency PA System

### Emergency Message Panel Z-FV208EV-AS



Specification	Z-FV208EV-AS
Power Source	24V DC (operating range: 19.5-27V), M3 screw terminal ; Usable power supply unit : FV-200PS-AS
Current Consumption	200mA (rated) ; 100mA (standby)
Message Announcement	8 Messages : Alert, Evacuation, False, Clear, Message1, Message2, Message3, Message 4 Repeated continuously
Audio Input	Fireman's microphone (accessory): -55dB* , 2.2kΩ, unbalanced, XLR connector SD/MMC card slot ( up to 32 GB, Type file : MP3 File)
Audio Output	EV Output : -20 dB*, unbalanced, Removable terminal block
Control Input	FA Input, Stop, 8 Messages contact input : No-voltage make contact input, open voltage : 24 V DC, Short circuit current : Under 5 mA, Removable terminal block
Control Output	EV Output : Contact switch ( normally open), Removable terminal block 8 Control outputs : Relay contact output, rated voltage : 24 V DC
Frequency Response	20 - 20,000 Hz, ±3 dB
Distortion	Under 1% (1kHz, rated output)
Indicator	Power, Fire, Alert, Evacuation, False, Clear, Message 1, Message 2, Message 3, Message 4
Format File	MP3 File (Bit rate 320kbps)
Recording System	USB data transfer
Maximum Recording Time	25 minutes
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel : Aluminum, Black, Paint
Dimension	482(W) x 88.4(H) x 353.3(D)mm
Weight	4.2kg
Accessories	Removable terminal plug (2pins) x 7, removable terminal plug (3pins) x 8, instruction manual x 1

### Pre Amplifier Mixer Panel Z-FV200PP-AS



Specification	Z-FV200PP-AS
Power Source	Usable power supply unit: Z-FV200PS-AS; 24V DC (operating range: 19.5-27V), M3 screw terminal
Current Consumption	110mA
Audio Input	EV: -20dB*, 600Ω, unbalanced, removable terminal block (2pins) Timer: -20dB*, 600Ω, unbalanced, removable terminal block (2pins) Paging: -60/-20dB* (selectable), 600Ω, balanced, removable terminal block (3pins) RF Link: 0dB*, 600Ω, unbalanced, removable terminal block (2pins) MIC/Line input 1- 4: -60/-20dB* (selectable), 600Ω, balanced, removable terminal block (3pins) AUX 1-2: -20dB*, 10kΩ, unbalanced, RCA Jack
Audio Output	Priority output: 0dB*, balanced, removable terminal block (3pins) BGM output: 0dB*, balanced, removable terminal block (3pins)
Control Input	Timer: No-voltage make contact input, open voltage : 24V DC, short-circuit current : Under 5mA, removable terminal block (2pins) Paging: No-voltage make contact input, open voltage : 24V DC, short-circuit current : Under 5mA, removable terminal block (2 pins) EV : No-voltage make contact input, open voltage : 24V DC, short-circuit current : Under 5mA, removable terminal block (2 pins)
Control Output	All Call: Contact Switch (Normally Open), removable terminal block (2pins)
Frequency Response	50Hz-15kHz, ±3dB, 1kHz
Muting	MIC/INPUT1: Mutes other input signals (Mic/Line2-4, AUX1-2) by 0-30dB attenuation
Phantom Power	MIC/INPUT1 (selectable) (+21V DC)
Priority Control	Fireman's microphone>EV>Timer>Paging> Remote microphone>Mic/Line1>Mic/Line2-4 & AUX1-2

Tone Control	Bass: -10dB at 100Hz, +10dB at 100Hz (for input BGM) Treble: -10dB at 10kHz, +10dB at 10kHz (for input BGM)
S/N Ratio	Over 60dB
Distortion	Under 1% (1kHz, rated output)
LED Indicator	Power (Green)
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel : Aluminum, Black, Paint
Dimension	482(W) x 88.4(H) x 353.3(D)mm
Weight	4.2kg
Accessories	Removable terminal plug (2pins) x 7, removable terminal plug (3pins) x 8, instruction manual x 1

## ■ Amplifier Changeover Panel

### Z-FV200CA-AS



Specification	Z-FV200CA-AS
Power Source	24V DC (operating range 21.6 - 26.4V); M3 screw terminal
Current Consumption	240mA
No. of Input Channel	6 Duty Amplifier, 1 Standby Amplifier
No. of Output Channel	6 Output
Failure Detection	Fault Buzzer with buzzer control switch
Display	Power Indicator (Green), Changeover Indicator(Orange), Fault, Buzzer Control Indicator (Red)
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel : Aluminum, Black, Paint
Dimension	482(W) x 44(H) x 343.2(D)mm
Weight	2.6kg
Accessories	Removable terminal plug (2pins) x 3, removable terminal plug (8pins) x 4, instruction manual x 1

## ■ Remote Microphone Receiver Panel

### Z-FV200RF-AS



Specification	Z-FV200RF-AS
Power Source	Usable power supply unit: Z-FV200PS-AS; 24V DC (operating range: 19.5-27V), M3 screw terminal
Current Consumption	230mA
No. of Zone Groups in Speaker Selector	Max.10 (Z-SS2010, Z-SS1010R)
Priority Control for the Remote Microphone	Last-in-1st-out-priority/ 1st-in-1st-out-priority/ individual priority/selectable
Control Input	All call: 1 input, No-voltage make contact input, open voltage 24V DC, short-circuit current: Under 5mA, removable terminal block (2pins)
Control Output	SS Control: 55 outputs, open collector output, removable terminal block (6pins)
Chime	Ascending 4 note-tone
RF Link-Audio Output	0dB*, unbalanced, removable terminal block (2pins)
RM Link- Usable Remote Mic	RM-200M Remote microphone extension unit: RM-210 (Max.4unit)
No. of connectable to remote microphone	Max. 4 RM-200
Maximum Cable Distance	Total 800m
S/N Ratio	Over 60dB
Distortion	Under 1% (1kHz, rated output)
LED Indicator	Power (Green), Error (Red)
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel : Aluminum, Black, Paint
Dimension	482(W) x 44(H) x 335.2(D)mm
Weight	2.8kg
Accessories	Removable terminal plug (2pins) x 2, removable terminal plug (3pins) x 1, removable terminal plug (6pins) x 10; instruction manual x 1

\*0dB: 1V, Specification measured at DC 24V

## Power Amplifier

### Z-FV224PA-AS



### Z-FV248PA-AS



Specification	Z-FV224PA-AS	Z-FV248PA-AS
Power Source	220-230V AC, 50/60Hz; 24V DC (19.5 - 27V); M4 screw terminal, distance between barriers : 12mm	
Power Consumption	AC at rated output: 565W (condition: AC230V) AC at no signal: 22W IEC60065: 245W	AC at rated output: 1110W (condition: AC230V) AC at no signal: 44W IEC60065: 480W
Current Consumption	DC at rated output: 15A (condition: DC27V) DC at no signal: 0.5A IEC60065: 5.8A	DC at rated output: 30A (condition: DC27V) DC at no signal: 1.0A IEC60065: 10.9A
Rated Output	240W	480W
Input	2 inputs, 0dB* , 20kΩ balanced, removable terminal plug (3pins); Input module VP-200VX (option)	
Output Impedance	21Ω(70V), 42Ω(100V)	10Ω(70V), 21Ω(100V)
Speaker Output	M4 screw terminal, distance between barriers: 12mm	
Control Output	Fault Output : Make : Normal, Break: Error or Power Off	
S/N Ratio	Over 60dB	
Total Harmonic Distortion	Under 1% (1kHz, 1/3 rated output)	
Frequency Response	80Hz-15kHz, ±3dB, 1kHz	
Ventilation	Fan Cooling	
LED Indicator	Power (Green), Signal (Green), Peak (Red), Fault (Red) (Light: Overheat)	
Operating Temperature	0°C to +40°C	
Operating Humidity	Under 90% RH (no condensation)	
Finish	Panel Aluminum, Black, Alumite	
Dimension	482(W) x 88.4(H) x 337.2(D)mm	482(W) x 132(H) x 333.2(D)mm
Weight	13.3	18.6kg
Accessories	Removable terminal plug (3pins) x 3, Instruction Manual x 1	

## Power Supply Panel

### Z-FV200PS-AS



Specification	Z-FV200PS-AS
Power Source	220-230V AC, 50/60Hz; 24V DC (19.5 - 27V); M3 screw terminal
Power Consumption	160W (275VA) at rated power output (230V AC operation)
Output	AC Operation : 24V DC ±1, 5A (total) DC Operation : Voltage lowering DC input voltage approx. by 2V, M4 screw terminal
Display	AC Power Indicator (Green), DC Power Indicator (Orange)
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Panel Aluminum, Black, Alumite
Dimension	482(W) x 44(H) x 335(D)mm
Weight	3.2kg
Accessories	Power Cable YA-301...1

## Remote Microphone

### RM-200M



Specification	RM-200M
Power Source	24V DC (Operating range: 14-28V DC); Power input jack: Non-polarity type; Usable power input plug (Use the AC adapter AD-246 or equivalent): Outer diameter φ 5.5mm, inner diameter φ 2.1mm, length 9.5mm
Current Consumption	100mA or less
SN Ratio	60dB or more
No. of Function Keys	13, Emergency key (covered), Talk key
Emergency Broadcast*	Activation of Emergency Broadcast (pre-recorded announcement or live microphone announcement) by Emergency Broadcast Switch
Connection Cable & Connector	Category 5 STP cable, RJ45 connector
Finish	ABS resin, blueish gray (PANTONE 538 or its equivalent)
Dimension	190(W) x 76.5(H) x 215(D)mm (Gooseneck Microphone Excluded)
Weight	750g

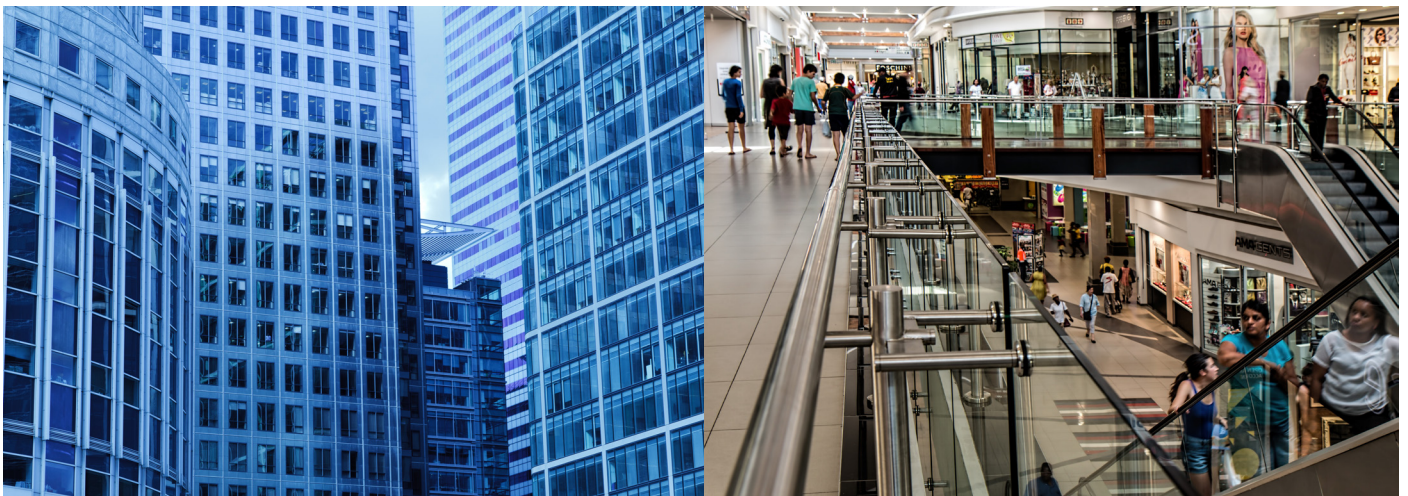
\* Connecting VM-2000 only

## Remote Microphone Extension

### RM-210



Specification	RM-210
Current Consumption	20mA max. (in terms of RM-200M's DC power input) 75mA max. (in terms of DC power inputs of RM-200X and RM-200XF) 80mA max. (in terms of DC power inputs of RM-200SA and RM-200SF)
Connection	Connection by way of dedicated cable
No. of Function Keys	10
Finish	ABS resin, blueish gray (PANTONE 538 or its equivalent)
Dimensions	110(W) x 76.5(H) x 215(D) in mm
Weight	350g
Accessory	Extension cable x 1, Linkage bracket A x 2, Linkage bracket B x 1, Screw for linkage bracket x 12
Applicable Unit	RM-200M, RM-200SA, RM-200SF, RM-200X, RM-200XF, N-8610RM



## Media Player

### Z-MD300A-AS



Specification	Z-MD300A-AS
Power Source	24V DC; M3 Screw terminal or DC socket connector
Current Consumption	350mA
Frequency Response	20 - 20,000Hz , ±3 dB
Tuner Receiving Frequency	87.5 - 108MHz ( 50kHz step)
Audio Input	USB Port for memory stick (up to 32GB, Type file : MP3 file); SD Card slot (up to 32GB, Type file : MP3 file); FM antenna terminals; Bluetooth
Audio Output	RCA audio output L and R channels for PRIORITY; RCA audio output L and R channels for TUNER RCA audio output L and R channels for USB/SD/BLUETOOTH
Control input	Play track 1-3, Play all, Stop : No- voltage make contact input, open voltage : 24V DC Short circuit current : Under 5mA, Removable terminal block
Channels of memory Tuner	30 Channels in total for FM broadcasts
Indicators	LCD Display Light Blue ; 3 LED Indicator Light Green
Operating Temperature	0°C to + 40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel : Aluminum, Black, Anodize ; Case: Steel Plate, Black , Painting
Dimensions	482(W) x 44(H) x 229.5(D) mm
Weight	2.1kg
Accessories	Remote Control ...1, Antenna FM Radio ...1, Removable Terminal Plug (2 pins) ...1, Removable Terminal Plug (3pins)...2

## Powered Speaker

### Powered Speaker ZH-P620S-AS



- Highly intelligible
- Compact horn speaker
- Ideal choice for both indoor and outdoor application
- Easy to install

Specification	ZH-P620S-AS
Power Source	12V-24V DC, 1.5-2A (DC Socket" + "Type A: 5.5 x 2.1mm)
Power Consumption	15W (1.25A) at Rated output; 25W (2.10A) at Maximum output
Input	0dB*, 10kΩ, Unbalanced (RCA plug)
Volume Adjustment	Internal volume control (Factory pre-set to maximum position)
Sound Pressure Level	113dB (1W, 1m at 500Hz to 2.5kHz peak level) Max.SPL (above 120dB)
Frequency Response	250Hz - 10kHz
Dust/Water Protection	IP65
Finish	Horn Flare: HIPS, resin, white ; Reflector Horn & Case: ABS resin, white ; Bracket, Screws & Bolts : Stainless Steel
Cable Cord	Length: 2m Flying Lead (RCA plug) & DC socket ("+" )
Dimension	292(W) x 230(H) x 280(D)mm
Weight	1.8kg
Accessories	Z-AD2430-AS AC/DC Adaptor

\*0dB : 1V

## Garden Speaker

### Garden Speaker ZGS-301



- Ideal for installations outdoors
- The unobtrusive design allows it to easily blend into the surroundings
- Designed exclusively for high impedance applications

Specification	ZGS-301
Enclosure	Shield type
Rated Input	30W (100V line), 15W (70V line)
Rated Impedance	100V line: 330Ω (30W), 670Ω (15W), 1kΩ (10W), 2kΩ (5W), 3.3kΩ (3W) 70V line: 330Ω (15W), 670Ω (7.5W), 1kΩ (5W), 2kΩ (2.5W), 3.3kΩ (1.5W)
Sensitivity	87dB (1W, 1m)
Frequency Response	100 - 8000Hz
Speaker Component	12cm splash-proof cone-type
Input Terminal	push-in terminal block
Applicable Cable	Solid copper wire: $\phi$ 0.8mm - $\phi$ 1.6mm Stranded copper wire : 0.75 - 1.25mm <sup>2</sup>
Water Capability	IPX 4 or equivalent
Finish	Top cover, Base: FRP resin, semi glossy ; Speaker panel : ABS resin, semi glossy; Legs : Aluminum, paint, semi glossy
Color	Dark Grey
Dimension	$\phi$ 270 x 335(h)mm
Weight	2.4kg

## Wireless Microphone

### Wireless Microphone Z-WS100H-AS



- 2 handheld wireless microphone
- plug and play
- 16 frequencies x 2 channels
- auto pairing
- built-in volume control in microphone
- rechargeable battery with type-C connector
- coverage area up to 50m
- equipped with extension cable



Specification	Z-WS100H-AS
Power Source	Battery Lithium ion 18650
Receiving Frequency	487 - 694 Mhz
Preset Frequency	16 x 2 channel (Auto Pairing)
Frequency Response	60Hz - 15kHz
THD	<1% @1kHz
S/N	> 98dB
Working range	Up to 50m
Operating Temperature	-10°C to + 50°C
Finish	ABS Resin, Black
Accessories	Mic Handheld ...2, Battery Lithium ion 18650 ...3, Wire Plug ...1, Wire charging type C ...1

	Receiver
Battery Type	Lithium ion 18650 (1500mAh)
Dimension	95 x 34 x 27mm
Weight	42g (without battery)

	Microphone
Carrier Frequency Power	10mW
Battery Type	Lithium ion 18650 (1500mAh)
Dimensions	∅55 x 245mm (without battery)
Weight	224g (without battery)

### Z-WS300H-AS

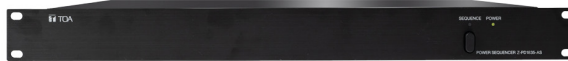


Specification	Z-WS300H-AS
Power Source	AC Adapter : 100 - 240V AC, 50/60Hz ; DC: 12-15V
Power Consumption	600mA (13.5V DC, when operating with two tuner modules)
Receiving Frequency	488Mhz - 508Mhz
Audio Input	Mixed Audio : 0dB*, 8kΩ, unbalanced, phone jack Balance A: 0dB*, 10kΩ, balanced, XLR-3-32 type connector Balance B: 0dB*, 10kΩ, balanced, XLR-3-32 type connector
Antenna	Fixed Antenna
Indicator	RF-AF (CH-A), RF-AF (CH-B), Display
Signal to Noise Radio	More than 80dB (A-weight, balanced output)
Harmonic Distortion	1% or less
Frequency Response	45Hz - 15kHz
Distance	Up to 70m (open space)
Operating Temperature	-10°C to + 50°C
Finish	ABS Resin, Black
Dimensions	200(W) x 44(H) x 184(D)
Weight	380g (0.84lb) (without microphone)
Accessories	AC adapter...1, Mic Holder...2, Microphone Handheld...2, Phone Jack Cable...1

## Powered Sequencer

### Power Sequencer Z-PD1835-AS 1

- AC Power distribution having 8 AC output
- Protect the equipment from high power surge
- Protect the speakers from damage cause by popping sound



Specification	Z-PD1835-AS 1
Power Source	AC 220V, 50/60Hz, Max. 3500W Max. load 16A
AC Outlet	8 AC outlets, Type C (2 pins plug), 10A
Indicator	Power indicator light green ; Sequence indicator light green
Control	2 Input, 2 Output ; No-voltage make contact input, open voltage : 5V DC; Short-circuit current: Under 5mA, removable terminal block (6 pins)
Cascade	Max. 4 units
Step Timing	1 second per AC outlets
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Finish	Front Panel: Aluminum Hair Line, Painting Black ; Case : Steel Plate, Painting Black
Dimensions	482(W) x 44(H) x 326.5(D)mm
Weight	3.5kg
Accessories	Removable terminal plug (3 pins)...2

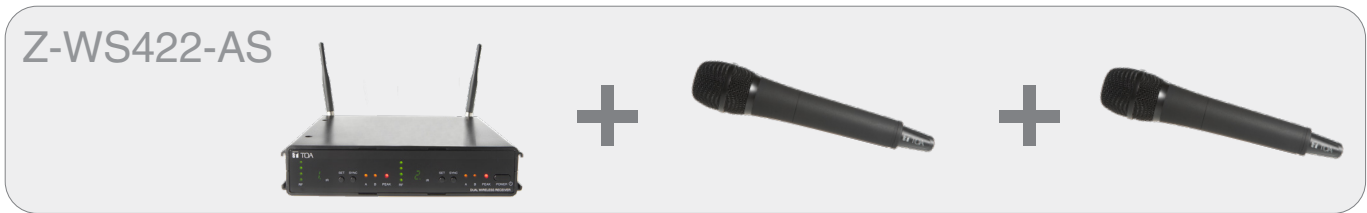
# Wireless Microphone System



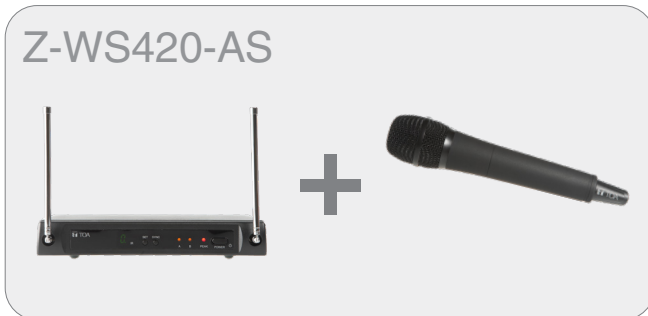
## Z-WS400-AS Series

- Available in dual channel and single channel models
- IR Sync
- Single Channel : Selectable Up to 4 simultaneous channels | Dual Channel : Selectable Up to 16 simultaneous channels  
\*depending on region

### Dual Channel Wireless Microphone System

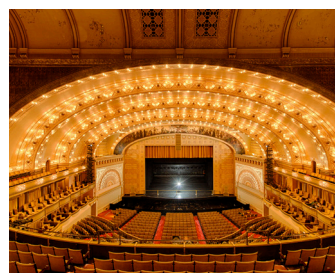


### Single Channel Wireless Microphone System



Microphones	Handheld Microphone	Wireless Transmitter
Microphone unit	Dynamic with cardioid pattern	Back Electret Condenser, Omni-directional
RF Carrier Power		10 mW
Audio Frequency Response	80 Hz - 15 kHz	50 Hz - 15 kHz
Audio input Level	140 dB SPL (maximum)	-6 dBV (maximum), mic gain 0dB
Battery Life		approx. 10 hours
Battery		1 AA size alkaline battery, 1.5 V
Finish		Resin, coating
Dimensions	250 x ø55 mm	62 (W) x 100 (H) x 25 (D) mm (with clip)
Weight	245 g (with battery)	85 g (with battery)

Receivers	Single Channel	Dual Channel
Diversity Reception	AC mains (supplied AC-DC adapter must be used)	
Frequency Range	633 - 671 MHz, UHF	
Sensitivity	10µV at 45 dBA S/N	
Squelch (SQ)	Tone SQ, Carrier SQ, Noise SQ	
Audio Frequency Response	50 Hz - 15 kHz	
Audio Output Level (Maximum)	Balanced (XLR socket) : -20 dBu Unbalanced (1/4" jack socket) : 10 dBu	Balanced (XLR socket) : 16 dBu Unbalanced (1/4" jack socket) : 10 dBu
Power Supply	11 - 18 VDC 300 mA	11 - 18 VDC 500 mA
Dimensions	215 (W) x 39 (H) x 102 (D) mm (excluding antenna and BNC)	210 (W) x 44 (H) x 202 (D) mm (excluding antenna)
Weight	480 g	720 g
Option	Mounting bracket kit: MB-S4RX	Mounting bracket kit: MB-WT3 , MB-WT4



Conference Meeting, Auditorium Performance, Speech Presentations and Classroom Teaching

**Z-NC5250R-AS**  
IR Dome Full HD Network Camera



- H.265 image compression
- Indoor Use
- Day & Night Function (high-sensitivity black & white mode in dark places)
- Wide Dynamic Range (WDR) Function
- PoE (IEEE802.3af) compatible
- Include with Audio input & Audio Output
- Impact resistant (IK 03)
- Support Onvif

Specification	Z-NC5250R-AS
Power Source	PoE (IEEE802.3af)
Images Sensor	1 /2.8 type CMOS
Effective number of pixel	1945 (H) × 1097 (V) 2.13 million pixels
Dynamic range	120 dB or more (at wide dynamic: at HIGH)
Lens Focal length	f=3.1~10.0mm (3.2 times)
Maximum aperture ratio	1 : 1.5 – 2.8
Angle of view	[Shooting mode 16:9] Horizontal: 113° (W) ~ 34° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 3:2] Horizontal: 89° (W) ~ 28° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 4:3]Horizontal: 80° (W) ~ 26° (T), Vertical: 59° (W) ~ 19° (T)
Image compression method	Stream 1, 2, 4: H. 265, H. 264 ; Stream 3: JPEG
Image size (resolution)	[Shooting mode 16:9] - Stream 1, 4: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180; Stream 2: 1280 x 720, 640 x 360, 320 x 180 ; Stream 3: 1920 x 1080, 1280 x 720, 640 x 480, 640 x 360, 320 x 180 [Shooting mode 3:2] - Stream 1-4: 720 x 480 [Shooting mode 4:3] - Stream 1, 3, 4: 1280 x 960, 640 x 480, 320 x 240; Stream 2: 640 x 480, 320 x 240
Frame Rate	H. 265, H. 264: up to 30 fps ; JPEG: up to 15 fps
Audio compression method	G. 711 μ-law, ACC-LC
Audio sampling frequency	G. 711 μ-law: 8 kHz; ACC-LC: 16 kHz, 32 kHz
SD card recording (*2)	Resolution: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Recording rate: up to 15 fps Compression method: H.264
Network I/F	10BASE-T/100BASE-TX automatic/fixd: RJ45
Network protocol	TCP, UDP, RTP, RTCP, RTSP, IGMP, HTTP, HTTPS, FTP, NTP, SNMP, SMTP, SSL/TLS, RTMP
Impact Resistance	0.35J (IK 03)
Place of use	Indoor
Finishing	Case: Polycarbonate + ABS resin off-white paint; Dome part: Acrylic resin (transparent)
Size	Ø125x106.3(H) mm
Mass	550 g

\* 0 dB = 1 V



**Z-NC5450R-AS**  
Outdoor IR Full HD Network Camera

**HD ONVIF**



- H.265 image compression
- Day & Night Function (high-sensitivity black & white mode in dark places)
- Wide Dynamic Range (WDR) Function
- Dustproof & waterproof (IP 66)
- Impact resistant (IK 06)
- PoE (IEEE802.3af) compatible
- Include with Audio input & Audio Output
- Support Onvif

Specification	Z-NC5450R-AS
Power Source	PoE (IEEE802.3af)
Images Sensor	1 /2.8 type CMOS
Effective number of pixel	1945 (H) × 1097 (V) 2.13 million pixels
Dynamic range	120 dB or more (at wide dynamic: at HIGH)
Infrared LED irradiation distance	50 m
Focal length	f=3.1~10.0mm (3.2 times)
Maximum aperture ratio	1 : 1.5 – 2.8
Angle of view	[Shooting mode 16:9] Horizontal: 113° (W) ~ 34° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 3:2] Horizontal: 89° (W) ~ 28° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 4:3]Horizontal: 80° (W) ~ 26° (T), Vertical: 59° (W) ~ 19° (T)
Image compression method	Stream 1, 2, 4: H. 265, H. 264 ; Stream 3: JPEG
Image size (resolution)	[Shooting mode 16:9] Stream 1, 4: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Stream 2: 1280 x 720, 640 x 360, 320 x 180 ; Stream 3: 1920 x 1080, 1280 x 720, 640 x 480, 640 x 360, 320 x 240, 320 x 180 [Shooting mode 3:2] Stream 1-4: 720 x 480 [Shooting mode 4:3] Stream 1, 3, 4: 1280 x 960, 640 x 480, 320 x 240 ; Stream 2: 640 x 480, 320 x 240
Frame Rate	H. 265, H. 264: up to 30 fps ; JPEG: up to 15 fps
Audio compression method	G. 711 μ-law, ACC-LC
*SD card recording (2)	Resolution: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Recording rate: max. 15 fps Compression method: H.264 ; Compatible SD card: SDXC (*3)
Network I/F	10BASE-T/100BASE-TX automatic/fix: RJ45
Network protocol	TCP, UDP, RTP, RTCP, RTSP, IGMP, HTTP, HTTPS, FTP, NTP, SNMP, SMTP, SSL/TLS, RTMP
Impact Resistance	1J (IK 06)
Dustproof / waterproof performance	IP66
Place of use	Indoors, outdoors (excluding coast and industrial areas with strong corrosive conditions, places with a lot of dust, and high places subject to strong wind pressure)
Finishing	Case/base/sunshade: Aluminium pearl white painted ; Base cover: ASA resin pearl white painting Front Panel: PC resin (transparent, hydrolic coat), PC (transparent), PC resing (black)
Size	120 (W) x 214 (H) x 354.5 (D) mm
Mass	1.9 kg

\* 0 dB =1 V

**Z-NC5850R-AS**  
Outdoor IR Dome Full HD Network Camera

**HD ONVIF**



- H.265 image compression
- Day & Night Function (high-sensitivity black & white mode in dark places)
- Wide Dynamic Range (WDR) Function
- Dustproof & waterproof (IP 66)
- Impact resistant (IK 10)
- PoE (IEEE802.3af) compatible
- Include with Audio input & Audio Output
- Support Onvif

Specification	Z-NC5850R-AS
Power Source	PoE (IEEE802.3af)
Images Sensor	1 /2.8 type CMOS
Effective number of pixel	1945 (H) × 1097 (V) 2.13 million pixels
Dynamic range	120 dB or more (at wide dynamic: at HIGH)
Infrared LED irradiation distance	50 m
Focal length	f=3.1~10.0mm (3.2 times)
Maximum aperture ratio	1 : 1.5 – 2.8
Angle of view	[Shooting mode 16:9] Horizontal: 113° (W) ~ 34° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 3:2] Horizontal: 89° (W) ~ 28° (T), Vertical: 59° (W) ~ 19° (T) [Shooting mode 4:3]Horizontal: 80° (W) ~ 26° (T), Vertical: 59° (W) ~ 19° (T)

Image compression method	Stream 1, 2, 4: H. 265, H. 264 ; Stream 3: JPEG
Image size (resolution)	[Shooting mode 16:9] Stream 1, 4: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Stream 2: 1280 x 720, 640 x 360, 320 x 180 ; Stream 3: 1920 x 1080, 1280 x 720, 640 x 480, 640 x 360, 320 x 240, 320 x 180 [Shooting mode 3:2] Stream 1-4: 720 x 480 [Shooting mode 4:3] Stream 1, 3, 4: 1280 x 960, 640 x 480, 320 x 240 ; Stream 2: 640 x 480, 320 x 240
Frame Rate	H. 265, H. 264: up to 30 fps ; JPEG: up to 15 fps
Audio compression method	G. 711 $\mu$ -law, ACC-LC
SD card recording (*2)	Resolution: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Recording rate: up to 15 fps Compression method: H.264 ; Compatible SD card: SDXC (*3)
Network I/F	10BASE-T/100BASE-TX automatic/fixd: RJ45
Network protocol	TCP, UDP, RTP, RTCP, RTSP, IGMP, HTTP, HTTPS, FTP, NTP, SNMP, SMTP, SSL/TLS, RTMP
Dustproof / waterproof performance	IP66
Impact resistance	20J (IK10)
Place of use	Indoors, outdoors (excluding coast and industrial areas with strong corrosive conditions, places with a lot of dust, and high places subject to strong wind pressure)
Finishing	Case/Bezel: Aluminium die-cast pearl white painted ; Dome cover: Polycarbonate (transparent) hydrophilic coat
Size	$\varnothing$ 154.2x153 (H) mm
Mass	1.7 kg

\* 0 dB = 1 V

## Z-NC5850R-AS Outdoor IR Dome Full HD Network Camera

**HD** ONVIF



- H.265 image compression
- Day & Night Function (high-sensitivity black & white mode in dark places)
- Wide Dynamic Range (WDR) Function
- Dustproof & waterproof (IP 66)
- Impact resistant (IK 10)
- PoE (IEEE802.3af) compatible
- Include with Audio input & Audio Output
- Support Onvif
- 12x Electronic Zoom

Specification	Z-NC5700A-AS
Power Source	PoE+ (IEEE802.3at) or 60W injector (*1)
Power Consumption	23.0 W: PoE+ (DC54 V, 426 mA) ; 48.8 W: 60W injector (*1) (DC54 V, 904 mA)
Images Sensor	1 /2.8 type CMOS
Effective number of pixel	1936 (H) x 1100 (V) 2.12 million pixels
Minimum subject illuminance	[When color night mode function is enabled] 0.0002 lx (50%, color, F1.6, slow shutter off) [When color night mode function is disabled] 0.01lx (50%, color, F1.6, slow shutter off) 0.004 lx (20%, color, F1.6, slow shutter off, converted value) 0.0003 lx (20% color, F1.6, slow shutter 15/30 seconds, converted value) 0.0002 lx (50%, black and white, F1.6, slow shutter off)
Dynamic range	100 dB or more (at wide dynamic: at HIGH)
Zoom magnification	30 times
Focal length	f=4.3~129.0mm
Maximum aperture ratio	1 : 1.6 – 4.7
Maximum angle of view	[Shooting mode 16:9] Horizontal: 63.7° (W) ~ 2.3° (T), Vertical: 37.8° (W) ~ 1.3° (T) [Shooting mode 3:2] Horizontal: 52.9° (W) ~ 2.1° (T), Vertical: 37.8° (W) ~ 1.3° (T) [Shooting mode 4:3] Horizontal: 48.3° (W) ~ 1.6° (T), Vertical: 37.8° (W) ~ 1.3° (T)
Image compression method	Stream 1, 2, 4: H. 265, H. 264 ; Stream 3: JPEG
Image size (resolution)	[Shooting mode 16:9] Stream 1, 4: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Stream 2: 1280 x 720, 640 x 360, 320 x 180 ; Stream 3: 1920 x 1080, 1280 x 720, 640 x 480, 640 x 360, 320 x 240, 320 x 180 [Shooting mode 3:2] Stream 1-4: 720 x 480 [Shooting mode 4:3] Stream 1, 3, 4: 1280 x 960, 640 x 480, 320 x 240 ; Stream 2: 640 x 480, 320 x 240
Frame rate	H. 265, H. 264: up to 30 fps ; JPEG: up to 15 fps
Audio compression method	G. 711 $\mu$ -law, ACC-LC
SD card recording (*4)	Resolution: 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 ; Recording rate: max. 15 fps Compression method: H.264 ; Compatible SD card: SD x C (*5)
Network I/F	10BASE-T/100BASE-TX automatic/fixd: RJ45
Network protocol	TCP, UDP, RTP, RTCP, RTSP, IGMP, HTTP, HTTPS, FTP, NTP, SNMP, SMTP, SSL/TLS, RTMP
Network I/F	10BASE-T/100BASE-TX automatic/fixd: RJ45
Network protocol	TCP, UDP, RTP, RTCP, RTSP, IGMP, HTTP, HTTPS, FTP, NTP, SNMP, SMTP, SSL/TLS, RTMP
Dustproof / waterproof performance	IP66

Impact Resistance	20J (IK10)
Place of use	Indoors, outdoors (excluding coast and industrial areas with strong corrosive conditions, places with a lot of dust, and high places subject to strong wind pressure)
Finishing	Case: polycarbonate black (Munsell N1.0 approximate color) Decorative frame: polycarbonate black (Munsell N1.0 approximate color) painted Sunshade: ASA resin pearl white paint ; Dome cover: : polycarbonate (transparent) hydrophilic coat)
Size	Camera part external size: Ø209 x 250 (H) mm (Dome part external size: Ø148.5 mm)
Mass	3 kg

Notes:

- The personal computer requirements do not guarantee operation on all PCs.
- Windows and Microsoft Edge are registered trademarks of Microsoft Corporation in the United State and other countries
- Intel Core is trademark of intel corporation in the U.S and other countries.
- Other company and product are trademarks of the respective companies.

**ZA-D6500-AS 1**  
**Digital Power Amplifier**



- Class-D High-Efficiency Design
- 4-Channel + Bridge Function
- High Damping Factor
- Reliable and Cost-Efficient





Specification	ZA-D6500-AS 1
Power Source	220V AC, 50/60 Hz
Amplification System	Class D
Power Consumption	IEC 62368-1 : 544W
Input	CH 1-4 : 20kΩ (balanced) / 10kΩ (unbalanced), 0.775V / 1.4V (selectable), XLR-F connector
Output	Link 1-4 : XLR-M connector Output 1-4 (Max.) : 4 channels : 650W x 4 (8Ω), 1000W x 4 (4Ω) 2 channels (BRIDGE) : 1300W x 2(8Ω) NL4 speakON connector
Frequency Response	20 - 20.000Hz, ±3dB
Total Harmonic Distortion	0.3% or less (1kHz, Rated Output)
S/N Ratio	95dB or more
Indicator	Active, Signal, Clip, Protect
Operating Temperature	0 °C to + 35 °C
Operating Humidity	90% RH or less (no condensation)
Ventilation	Fan Cooling
Finish	Front Panel : Steel Plate, Black, Paint Case : Steel Plate, Black, Paint
Dimension	482 (W) x 107 (H) x 435 (D) mm
Weight	10.2 kg





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