YAMAHA

YAMAHA
Make Waves

SPEAKERS FOR COMMERCIAL INSTALLATIONS

VEGETABLE OIL INK This document is printed with Vegetable Oil Ink.

f Yamaha Commercial Installation Solutions

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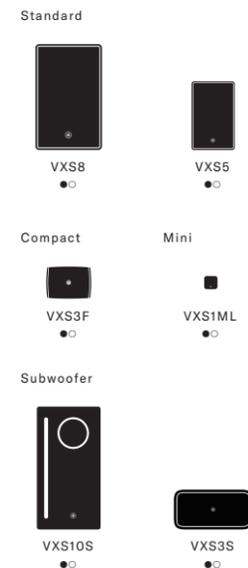
MUSIC
TO
YOUR
EARS
Yamaha Speakers
since 1967

1. High quality, richly musical sound

2. Visual design that harmonizes with any interior décor

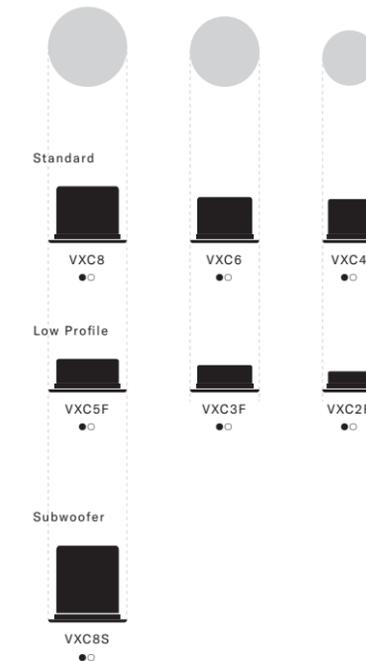3. Installation-friendly smart mechanical features

VXS, VXC and VXL series speakers have been optimized specifically for commercial sound applications, with accurate sound inspired by our long history of musical instrument production plus visual design that blends easily with any décor. Choose the models that best suit your needs from our ample lineup.

Surface-mount Speakers/Subwoofers
VXS SERIES

Standard

VXS8   VXS5

Compact   Mini

VXS3F   VXS1ML

Subwoofer

VXS10S   VXS3S

In-ceiling Speakers/Subwoofers
VXC SERIES

Standard

VXC8   VXC6   VXC4

Low Profile

VXC5F   VXC3F   VXC2F

Subwoofer

VXC8S

Column-type Line Array Speakers
VXL SERIES

Standard   PoE

VXL1-24   VXL1-16   VXL1-8   VXL1-16P

Recommended Combinations

For Simple Sound Systems

● **MA/PA Series**

Recommended applications:
Cafes, restaurants, bars, retail stores, classrooms, presentation rooms, etc.

For Advanced Sound Systems

● **MTX/MRX/XMV Series**
● **Controllers**
● **Peripherals**

Recommended applications:
Conference rooms, lecture halls, restaurants, hotels, banquet halls, office complexes, multi-purpose facilities, shopping malls, etc.

WHAT MAKES US APART

With such a prolific history of instrument manufacture comes a unique musical sensibility that deeply influences all our speaker lineups. We won't settle for anything less than truly authentic, superior sound that satisfies the most discriminating tastes.

SOUND

We've adopted a uniquely utilitarian approach to speaker design that derives its aesthetic from the functionality of the speaker's construction so that every curve and corner serves a purpose that will ultimately benefit our customers and their clientele— with style.

DESIGN

Our meticulous parts and material selection process and innovative proprietary technologies ensure the same level of durability and reliability as our acclaimed professional audio gear and masterfully crafted musical instruments.

QUALITY

MAKE
IMPRESSIONS

Just like lighting, aroma, and interior design, the sounds a customer is initially exposed to can have a significant impact on their comfort and enthusiasm for your business.

Creating an inviting, high-quality sonic environment will not only complement your other stylistic choices, but influence per-customer spending and repeat business.

Yamaha is invested in the creative choices you make with your space by providing state-of-the-art products with superb musicality that ensure your vision resonates with everyone who enters.

SHOWCASE

Yamaha - The Sound Business Choice

Volvo Studio Aoyama (Showroom, Japan)

Petit Palace Hotel (Hotel, Spain)

Mitsui Garden Hotel (Hotel, Japan)

InterContinental Hotel (Hotel, Switzerland)

Usine (Restaurant, Sweden)

La Maison du Sake (Restaurant, France)

Le Agavi (Hotel, Italy)

Billund Airport (Airport, Denmark)

Thermes Marins Monte-Carlo (Spa, Monaco)

Victoria & Albert (Museum, UK)
Photo by the V&A Museum

Shang Xia (Boutique, China)

Stone Harbor Municipal Courthouse (Courthouse, USA)

Eglise Saint-Denis-Sainte-Foy (Church, France)

Scalaria (Hotel, Austria)
Scalaria.com

Walkerhill Hotel & Resort (Hotel, Korea)

VXS SERIES

Surface-mount Speakers/Subwoofers

Standard

VXS8
●○

VXS5
●○

Compact

VXS3F
●○

Mini

VXS1ML
●○

Subwoofer

VXS10S
●○

VXS3S
●○

Recommended for
Background Music System

Attractive, Discreet Design for Elegant Spaces

It is our goal to offer the most pleasing environments possible, both sonically and visually. The sleek curves and attractive, minimalist design of VXS series make them easily adaptable to any commercial environment seeking a unique, subtle complement to the overall aesthetic.
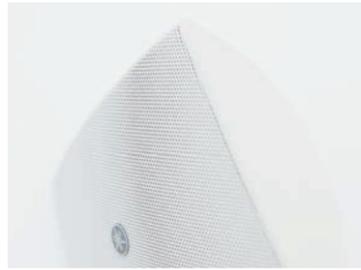
Safe and Efficient Installation

The brackets supplied with the VXS series are all you need for smooth, streamlined wall or ceiling mounting. The bracket itself is a compact design that facilitates mounting in tight spaces, while incorporating features for safe, efficient installation.

VXS8/VXS5

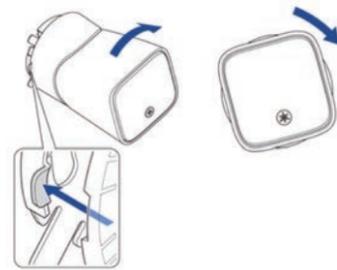A press-in bracket design leaves both hands free for easy wiring and angle adjustment.

Reverse-thread screws and safety pin prevent damage or injury due to the speaker accidentally falling during installation.

A design that prevents lateral movement during ceiling installation simplifies vertical angle adjustment.

VXS1ML

Align the speaker to the notch on the mounting bracket, and then attach the speaker. Secure the speaker by turning it clockwise.

✓ Featured Model

Good Things. Small Packages.

Mini Surface-mount Speaker
VXS1ML (VXS Series M)

Bigger isn't always better, and for more intimate commercial environments in particular, a subtle approach to the sights and sounds your customers experience can often leave a stronger impression. Yamaha's ultra-compact VXS1ML provides an attractive interior accent, while filling your space with music that helps shape your overall aesthetic and inspires your clientele.

Blending into Any Décor

A remarkably small cube with elegantly flowing lines and surfaces.

Room-filling Sound Experience

Carefully selected and tuned 1.5˝ driver with neodymium magnet, realizing wide coverage.

Installation Friendly

Wall-mount, ceiling mount, In-ceiling*, or hanging from lighting rail*.

*with optional accessories

59mm

Recommended Subwoofer: VXS3S

In situations where more substantial low end is required, the compact VXS3S subwoofer is a perfect match for the VXS1ML. Featuring unique SR-Bass™ technology, the VXS3S delivers impactful bass performance while reducing the enclosure size.
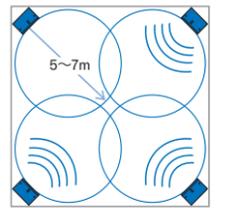

VXS1ML + VXS3S

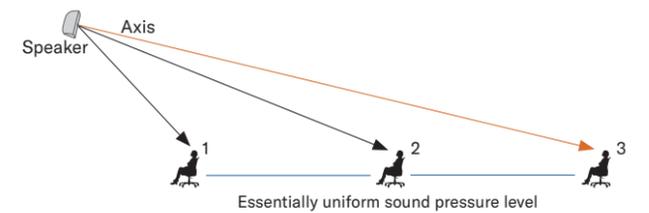## 💡 Tips for System Design & Installation

Speaker Layout

The coverage area of surface-mount speakers will depend on the mounting height rather than ceiling height. With surface-mount speakers installed at a height of around 3 meters, the coverage area will be somewhere between 5 and 7 meters, as shown in the below figure.

Higher speaker mounting positions will result in larger coverage circles: between 1 and 2 meters increase in diameter for every 1 meter in height, approximately.

5~7m
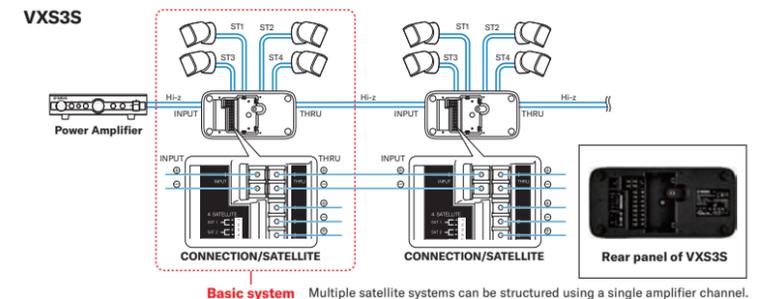
Speaker mounting position: around 3m height

Uniform sound pressure level can easily be achieved throughout the listening plane with speakers that include by aligning the speaker's axis with the head of the most distant target (listener). This works because of the relationship between distance and coverage angle. When the perpendicular axis is aligned with the last row, the natural distance attenuation at the last row and the off-axis attenuation at closer rows tend to result in uniform SPL distribution.

Speaker — Axis

Essentially uniform sound pressure level

*Yamaha provides dedicated speaker software application CISSCA for designing simple installation such as in-store background music system. Please see page 12 for the details.

Satellite Connection

The VXS10S/VXS3S subwoofers have satellite connectors on the rear panel, minimizing the number of amplifier channels required to get a system up and running. And since the subwoofers support high-impedance connections, it is possible to connect low-impedance satellite speakers while the subwoofer is connected to a high-impedance system. A built-in high-pass filter is automatically applied to the satellite speakers, providing exceptionally smooth, natural frequency crossover from subwoofer to satellites.

VXS3S

Power Amplifier

CONNECTION/SATELLITE   CONNECTION/SATELLITE   Rear panel of VXS3S

Basic system   Multiple satellite systems can be structured using a single amplifier channel.

VXS8
B W

430mm (16.9")
280mm (11.0")
278mm (10.9") × 239mm (9.4")
Net Weight: 8.2kg (18.1lbs)

VXS5
B W

176mm (6.9") × 163mm (6.4")
Net Weight: 3.6kg (7.9lbs)

VXS3F/VXS3FT
B W

84mm (3.3")
58mm (2.3") × 35mm (1.4")
VXS3F bracket (Lo-Z model)

130mm (5.1")
184mm (7.3") × 94mm (3.7")
106.4mm (4.2")
100mm (3.9") × 63mm (2.5")
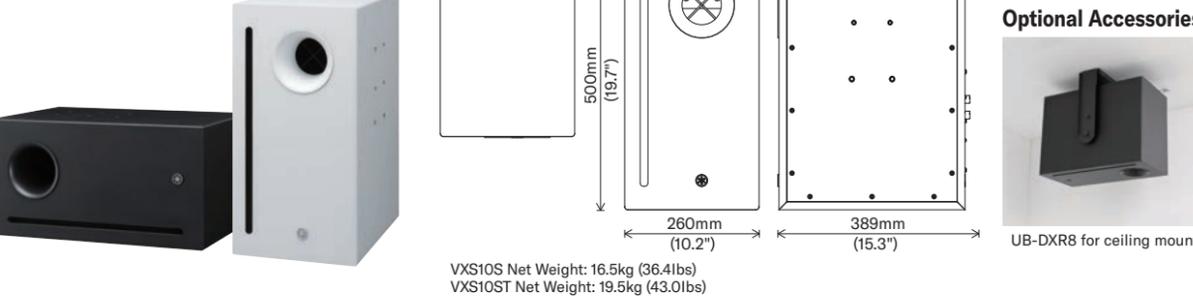VXS3FT bracket (Hi-Z model)
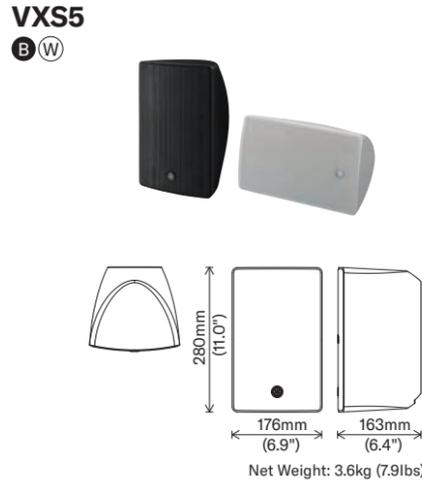
VXS3F Net Weight (with bracket): 1.1kg (2.4lbs),
VXS3FT Net Weight (with bracket): 1.7kg (3.7lbs)
*A transformer is attached to a bracket of the VXS3FT (Hi-Z model)

VXS1ML
B W

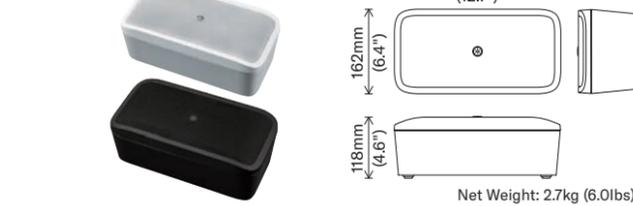62mm (2.4") × 82mm (3.2")
62mm (2.4") × ø62mm (ø2.4")
Net Weight: 0.17 kg (0.37lbs)

VXS10S/VXS10ST
B W

500mm (19.7")
260mm (10.2") × 389mm (15.3")
VXS10S Net Weight: 16.5kg (36.4lbs)
VXS10ST Net Weight: 19.5kg (43.0lbs)

Optional Accessories
UB-DXR8 for ceiling mount

Optional Accessories

CMA1M for in-ceiling mount
RMA1M for lighting-rail mount

VXS3S
B W

322mm (12.7")
162mm (6.4")
118mm (4.6")
Net Weight: 2.7kg (6.0lbs)

Optional Accessories
CMA3S for in-ceiling mount

*Dedicated mounting bracket is included in each model.

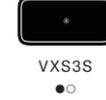---

Standard — VXS8 ●○
Compact — VXS5 ●○
Mini — VXS3F ●○ / VXS1ML ●○
Subwoofer — VXS10S ●○ / VXS3S ●○

VXS series		VXS8/VXS8W	VA version* (EN54-24 model)	VXS5/VXS5W	VA version* (EN54-24 model)	VXS3F/VXS3FW	VXS3FT/VXS3FTW	VXS1MLB/VXS1MLW	VXS10S/VXS10SW	VXS10ST/VXS10STW	VXS3SB/VXS3SW
Speaker type		2-way, Bass reflex		2-way, Bass reflex		Full-range, Acoustic suspension		Full-range, Acoustic suspension	Subwoofer, Bass reflex		Subwoofer, SR-Bass™
Components	LF	8″		5.25″		3.5″		1.5″	10″ Dual Voice Coil		3.5″
	HF	1″		0.75″		-		-	-		-
Crossover frequency		2.8kHz		3kHz		-		-	-		-
Frequency range (-10dB)		51Hz - 20kHz		62Hz - 20kHz		130Hz - 20kHz		180Hz - 20kHz	45Hz - 250Hz		65Hz - 180Hz
Nominal coverage (Horizontal x Vertical)		H100° x V100°		H120° x V120°		H150° x V160°		H170° x V170°	-		-
Power rating	NOISE	90W		75W		20W	-	5W	100W + 100W		20W
	PGM	180W		150W		40W	-	10W	200W + 200W		40W
	PEAK	360W		300W		80W	-	20W	400W + 400W		80W
Nominal impedance		8Ω		8Ω		8Ω	-	8Ω	8Ω + 8Ω		8Ω
Transformer tap	100V	60W, 30W, 15W		30W, 15W, 7.5W		-	15W, 7.5W, 3.8W	-	-	200W, 100W, 50W	15W, 7.5W, 3.8W
	70V	60W, 30W, 15W, 7.5W		30W, 15W, 7.5W, 3.8W		-	15W, 7.5W, 3.8W, 1.9W	-	-	200W, 100W, 50W, 25W	15W, 7.5W, 3.8W, 1.9W
SPL	Sensitivity (1W, 1m)	91dB SPL (Half-space)	89dB SPL (Full-space)	89dB SPL (Half-space)	88dB SPL (Full-space)	86dB SPL (Full-space)	-	79dB SPL (Full-space)	96dB SPL (Half-space)		79dB SPL (Full-space)
	Peak (Calculated, 1m)	117dB SPL	115dB SPL	114dB SPL	113dB SPL	105dB SPL	-	92dB SPL	125dB SPL		98dB SPL
Satellite filter		-		-		-		Network filter: HPF 200Hz, 6dB/OCT			
Satellite impedance		-		-		-		8Ω load per satellite output recommended			
I/O connectors		Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Barrier strip	Euroblock (2 pin)	Input: Euroblock (4 pin) Satellite out: Euroblock (4 pin)		Input: Barrier strip Satellite out: Barrier strip
Magnetically shielded		No									
Overload protection		Full-range power limiting to protect network and transducers									
Enclosure material	Cabinet	ABS (UL94 V-0)	ABS (UL94 5VB)	ABS (UL94 5VB)	ABS (UL94 5VB)	ABS (UL94 5VB)		ABS (UL94 V-0)	MDF		ABS (UL94 V-0)
	Baffle	PC/ASA	ABS (UL94 5VB)	PC/ASA	ABS (UL94 5VB)	ABS (UL94 5VB)		ABS (UL94 V-0)	-		ABS (UL94 V-0)
Grille material		Powder coated perforated aluminum				Powder coated perforated steel					Powder coated perforated steel
Finish	Black model	Munsell N3/RAL 9017 (approx.)						Munsell N3/RAL 9017 (approx.)			
	White model	Munsell N9.3/RAL9010 (approx.)						Munsell N9/RAL9010 (approx.)			
Dust and water resistance (IP rating)		IP35**		IP35**		-		-	-		-
Dimensions		W278mm (10.9″) x H430mm (16.9″) x D239mm (9.4″)		W176mm (6.9″) x H280mm (11.0″) x D163mm (6.4″)		W184mm (7.3″) x H130mm (5.1″) x D94mm (3.7″)		W62mm (2.4″) x H62mm (2.4″) x D82mm (3.2″)	W260mm (10.2″) x H500mm (19.7″) x D389mm (15.3″)		W322mmmm (12.7″) x H162mm (6.4″) x D118mm (4.6″)
Net weight		8.2kg (18.1lbs)		3.6kg (7.9lbs)		1.1kg (2.4lbs)	1.7kg (3.7lbs)	0.17 kg (0.37lbs)	16.5kg (36.4lbs)	19.5kg (43.0lbs)	2.7kg (6.0lbs)
Packaging		Pair		Pair		Pair	Pair	Pair	Single	Single	Single
Certificate		UL1480, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, NFPA70, CE, RoHS	UL1480, NFPA70, CE, EAC, RoHS	UL1480, NFPA70, CE, RoHS	CE, EAC, RoHS	CE, EAC, RoHS	UL1480, NFPA70, CE, RoHS
EN54-24 DoP number		-	0359-CPR-00406	-	0359-CPR-00406	-	-	-	-	-	-

* VA versions are not available in some regions.
** IP34 when installing the speaker to the ceiling vertically.

In-ceiling Speakers/Subwoofers

VXC SERIES

Standard

VXC8
●○

VXC6
●○

VXC4
●○

Low Profile

VXC5F
●○

VXC3F
●○

VXC2F
●○

Subwoofer

VXC8S
●○
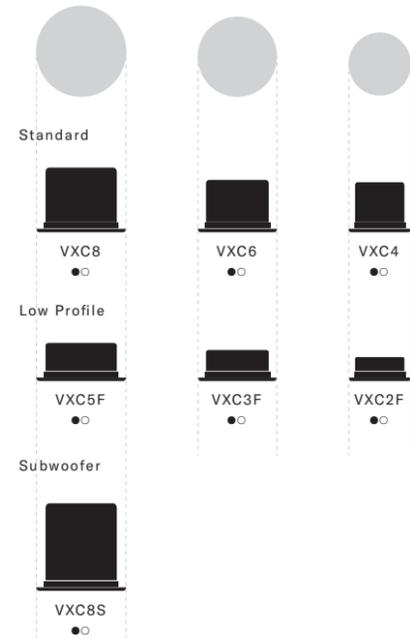
Recommended for
Background Music System

Smart Design for Safer, Faster Installation

The VXC ceiling speakers come with smart mechanical features that contribute to significantly safer, faster installation. And since these models support both low-impedance and high-impedance connection, the need for extra stock is minimized and systems can be designed to ideally meet the requirements of any application.
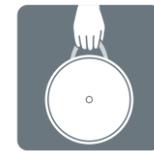
Portable
A built-in "Carrying Band" not only makes the speaker easy to carry around, but also increases safety when working on a stepladder.

Secure
An "Anti-Drop Tab" mechanism securely holds the speaker in place so that the installation can proceed safely and efficiently. There's also a release lever that allows the speaker to be smoothly removed from the ceiling as required.

Fast
Double threaded screws used for the speaker clamp mechanism allow the clamps to be tightened twice as fast as conventional screws.

Hi-Z or Lo-Z
Both high-impedance and low-impedance connections are supported, and speaker wattage can be easily switched even after installation.

Streamlined
The supplied speaker grilles are firmly and elegantly held in place by powerful magnets. An anti-drop wire is also included.

Paintable
The supplied grilles can be painted any color to match interior decor.

Carrying Band
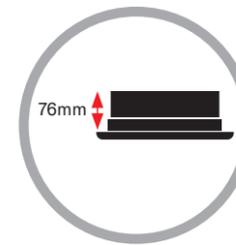
Anti-Drop Tab

Featured Model

Style and Substance.

Low-profile In-ceiling Speaker
VXC2F (VXC Series F)

Featuring a newly designed speaker driver unit, optimally tuned for music playback, the VXC2F's super slim, lightweight construction and flexible design can easily adapt to the strictest installation limitations, ensuring superb audio performance wherever they're placed. It allows you to streamline the installation process and seamlessly integrate high-quality audio into a restaurant, retail, or professional environment, which proves that style and substance aren't always mutually exclusive.

Super Slim Back Can
A back can less than 76.2mm/3 inches deep, which directly contributes to flexible installation.

Streamlined Design
Grilles with minimum rim width, available in black or white, and removable logo.

Pendant-mount Option
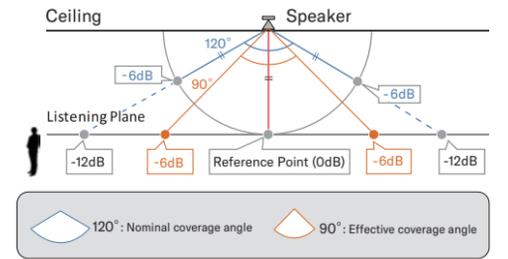Suspension hardware and loudspeaker cosmetic cover designed for hanging from open ceilings.

76mm

Recommended Subwoofer: VXC8S
Yamaha also offers an in-ceiling subwoofer that ideally matches for VXC series speakers, smoothly extending the low frequency range with superb sonic quality without spoiling interior design.

VXC2F + VXC8S

Tips for System Design & Installation

Speaker Layout
It is important to note that the nominal coverage angle listed in ceiling speaker specifications is not the same as the speaker's actual effective coverage angle. SPL at the nominal coverage angle is 6dB lower than the on-axis SPL, measured at a constant distance from the speaker. The effective coverage angle is defined as the angle at which the SPL is 6dB lower than the on-axis SPL at the listening plane. The effective coverage angle is usually about 70~80% of the nominal coverage angle.

Ceiling / Speaker
120°
90°
-6dB
-6dB
Listening Plane
-12dB -6dB Reference Point (0dB) -6dB -12dB

120° : Nominal coverage angle   90° : Effective coverage angle

A number of methods can be employed when laying out speaker coverage areas. The "Edge to Edge" method is normally used for background music systems. The chart lists approximate coverage areas at a number of ceiling heights for standing listeners (listener ear height = around 1.5 meters). If the ceiling height is 3 meters, the coverage area will be approximately 4 meters. In this case a ceiling speaker spacing of 4 meters will provide uniform coverage with minimal volume variation.

Edge to Edge
This method lines up the -6dB SPL coverage areas.

-6dB SPL coverage area
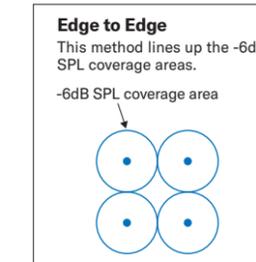
Ceiling height	2.5m	3.0m	3.5m	4.0m	4.5m
Ceiling speaker spacing	3.0m	4.0m	5.0m	6.0m	7.0m

4m
3m
Listener ear height: around 1.5 m

CISSCA
CISSCA, the Commercial Installation Solutions Speaker Calculator, is a Yamaha's dedicated software application that rapidly calculates the number of speakers required for optimum performance in installations, based on the size of the room, type of system, type of speakers, and speaker layout pattern. Output also includes an estimate of effective sound pressure level. CISSCA also has a "Report" function that makes it easy to create documentation. Downloadable from Yamaha website for free.
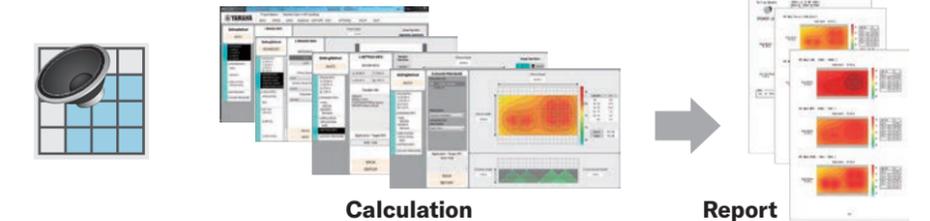
Calculation   Report

VXC8
(B)(W)

EN54-24 model
(VA version)
277.5mm

241mm
259mm (10.2")
Ø325mm (Ø12.8")
295mm (11.6")

Net Weight: 6.6kg (14.6lbs)
Cutout Size: Ø285mm (11.3¨)

VXC6
(B)(W)

EN54-24 model
(VA version)
225.5mm

189mm
206mm (8.1")
Ø286mm (Ø11.3")
241mm (9.5")

Net Weight: 4.4kg (9.7lbs)
Cutout Size: Ø247mm (9.8¨)

VXC4
(B)(W)

EN54-24 model
(VA version)
219.5mm

182mm
195mm (7.7")
Ø225mm (Ø8.9")
232mm (9.1")

Net Weight: 2.6kg (5.7lbs)
Cutout Size: Ø186mm (7.3¨)

VXC5F
(B)(W)

130mm
143mm (5.7")
Ø324mm (Ø12.8")

Weight: 3.1 kg (6.8 lbs)
Cutout Size: Ø285mm (11.3¨)

VXC3F
(B)(W)

100mm
112mm (4.4")
Ø285mm (Ø8.9")

Net Weight: 2.5 kg (5.5 lbs)
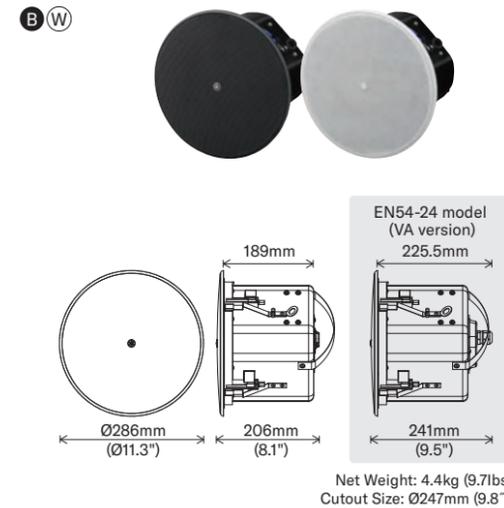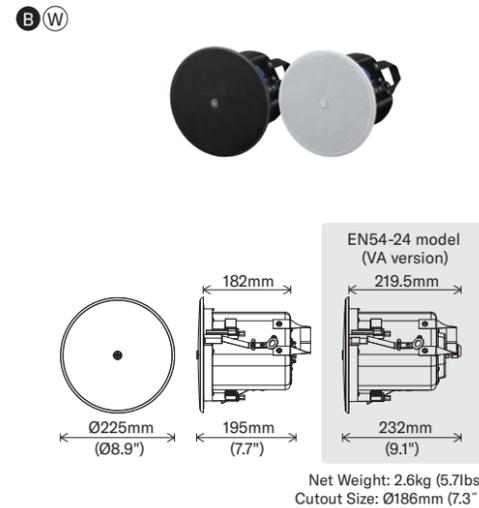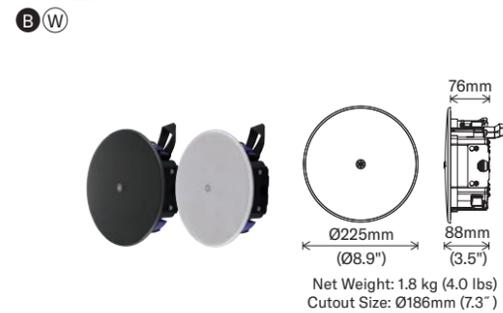Cutout Size: Ø247mm (9.8¨)

VXC2F
(B)(W)

76mm
88mm (3.5")
Ø225mm (Ø8.9")

Net Weight: 1.8 kg (4.0 lbs)
Cutout Size: Ø186mm (7.3¨)

VXC8S
(B)(W)

300mm
314mm (12.4")
Ø324mm (Ø12.8")

Net Weight: 8.5kg (18.7lbs)
Cutout Size: Ø285mm (11.3¨)

Optional Accessories

PK-C4
Pendant-mount kit for VXC4/VXC2F
(B)(W)

AB-C2 / AB-C8S*
Tile rail kit for VXC2F/VXC8S

*Tile rail kit is included in all models except VXC2F/VXC8S.

Standard | Low Profile | Subwoofer

VXC8 | VXC6 | VXC4 | VXC5F | VXC3F | VXC2F ** | VXC8S**

| VXC series		VXC8/VXC8W		VXC6/VXC6W		VXC4/VXC4W		VXC5F/VXC5FW		VXC3F/VXC3FW		VXC2FB/VXC2FW	VXC8SB/VXC8SW
			VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)		
Speaker type		2-way, Acoustic suspension		2-way, Acoustic suspension		Full-range, Bass reflex	Full-range, Acoustic suspension	Full-range, Bass reflex		Full-range, Bass reflex		Full-range, Bass reflex	Subwoofer, Band pass
Components	LF	8¨		6.5¨		4¨		4.5¨		3.5¨		2.5¨	8¨
	HF	1¨		0.75¨									
Crossover frequency		3kHz		3.2kHz		-		-		-		-	-
Frequency range (-10dB)		55Hz - 20kHz		56Hz - 20kHz		80Hz - 20kHz		60Hz - 20kHz		71Hz - 20kHz		67Hz - 20kHz	44Hz - 280Hz
Nominal coverage (Conical)		100°		110°		130°		130°		140°		160°	-
Power rating	NOISE	90W		75W		30W		40W		20W		15W	100W
	PGM	180W		150W		60W		80W		40W		30W	200W
	PEAK	360W		300W		120W		160W		80W		60W	400W
Nominal impedance		8Ω		8Ω		8Ω		8Ω		8Ω		8Ω	8Ω
Transformer tap	100V	60W, 30W, 15W		60W, 30W, 15W		30W, 15W, 7.5W		30W, 15W, 7.5W		15W, 7.5W, 3.8W		15W, 7.5W, 3.8W, 1.9W	60W, 30W, 15W, 7.5W
	70V	60W, 30W, 15W, 7.5W		60W, 30W, 15W, 7.5W		30W, 15W, 7.5W, 3.8W		30W, 15W, 7.5W, 3.8W		15W, 7.5W, 3.8W, 1.9W		15W, 7.5W, 3.8W, 1.9W, 1W	60W, 30W, 15W, 7.5W, 3.8W
SPL	Sensitivity (1W, 1m)	90dB SPL (Half-space)	89dB SPL (Half-space)	86dB SPL (Half-space)		87dB SPL (Half-space)	89dB SPL (Half-space)	88dB SPL (Half-space)	87dB SPL (Half-space)	86dB SPL (Half-space)	86dB SPL (Half-space)	88dB SPL (Half-space)
	Peak (Calculated, 1m)	116dB SPL	114dB SPL	111dB SPL		108dB SPL	111dB SPL	109dB SPL	106dB SPL	105dB SPL	104dB SPL	114dB SPL
I/O connectors		Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Ceramic terminal block	Euroblock (4 pin)	Euroblock (4 pin)
Magnetically shielded		No											
Overload protection		Full-range power limiting to protect network and transducers											
Enclosure material	Cabinet (Back Can)	Steel		Steel		Steel		ABS (UL94 V-0)		ABS (UL94 V-0)		Steel	Steel
	Baffle	HIPS		HIPS		HIPS		ABS (UL94 V-0)		ABS (UL94 V-0)		ABS (UL94 V-0)	ABS (UL94 V-0)
Grille material		Powder coated perforated steel/Trim-ring: ABS (UL94 V-0)											
Finish	Black model	Munsell N3/RAL 9017 (approx.)											
	White model	Munsell N9.3/RAL9010 (approx.)											
Dust and water resistance (IP rating)		-	IP32	-	IP32	-	IP32	-	IP32	-	IP32	-	-
Dimensions		Ø325mm (12.8¨) x D259mm (10.2¨)	Ø325mm (12.8¨) x D295mm (11.6¨)	Ø286mm (11.3¨) x D206mm (8.1¨)	Ø286mm (11.3¨) x D241mm (9.5¨)	Ø225mm (8.9¨) x D195mm (7.7¨)	Ø225mm (8.9¨) x D232mm (9.1¨)	Ø324mm (12.8¨) x D143mm (5.7¨)		Ø285mm (11.3¨) x D112mm (4.4¨)		Ø225mm (8.9¨) x D88mm (3.5¨)	Ø324mm (12.8¨) x D314mm (12.4¨)
Net weight		6.6kg (14.6lbs)		4.4kg (9.7lbs)		2.6kg (5.7lbs)		3.1 kg (6.8 lbs)		2.5 kg (5.5 lbs)		1.8kg (4.0lbs)	8.5kg (18.7lbs)
Packaging		Pair	Pair	Pair	Pair	Pair	Pair	Pair	Pair	Pair	Pair	Single	Single
Certificate		UL1480, UL2043, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, UL2043, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, UL2043, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, NFPA70, CE, EAC, RoHS	EN54-24, CE, RoHS	UL1480, UL2043, NFPA70, CE, EAC, RoHS	UL1480, UL2043, NFPA70, CE, EAC, RoHS
EN54-24 DoP number		-	0359-CPR-00405	-	0359-CPR-00405	-	0359-CPR-00405	-	0560-CPR-152190027	-	0560-CPR-152190028	-	-

* VA versions are not available in some regions.
** Specifications of the VXC2F and VXC8S are tentative.

Column-type Line Array Speakers

VXL SERIES

Standard   PoE

VXL1-24   VXL1-16   VXL1-8   VXL1-16P
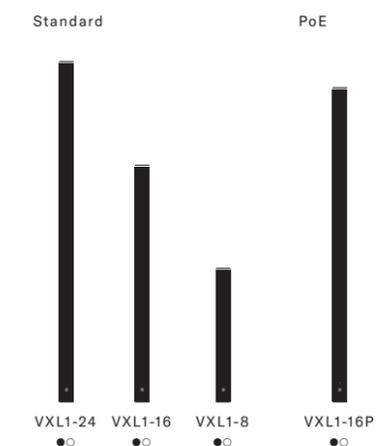
Recommended for
Speech/Presentation System


Sleek. Smart. Sound.

Blending Quality Sound with Visual Elegance

Ultra slim 54mm width appearance thanks to the small 1.5″ driver shared with VXS1ML yet redesigned with a large voice coil, delivering distortion-free sound over a broad band of playback frequencies.

54mm

Outstanding Projection and Clear Sound Reinforcement

A line-array configuration significantly reduces the amount of reflection at the ceiling and floor surfaces, which means sound pressure is affected less by distance. As a result, clearer, more consistent sound can be delivered to back-of-house without making front-of-stage excessively loud.
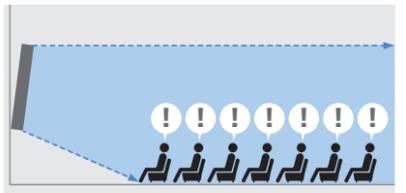
Less Feedback Noise

With line-array speakers the per-unit output is smaller than with point-source speakers, meaning that a microphone positioned nearby picks up less sound energy.

Vertical Coverage Expansion

The VXL1-16 and VXL1-24 feature special rear-panel switches that allow the lower vertical dispersion of the array to be easily expanded without having the angled speakers. This improves coverage at the front of the listening area in situations where the speakers are installed at a high location.
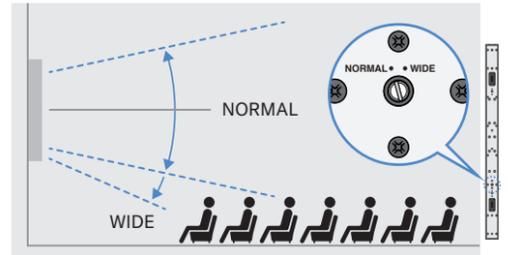
*VXL1-8's vertical dispersion is fixed

NORMAL ● WIDE

NORMAL

WIDE

Double Speakers

24+24 (V)
24+16 (V)
16+16 (V)

Vertical Coupling
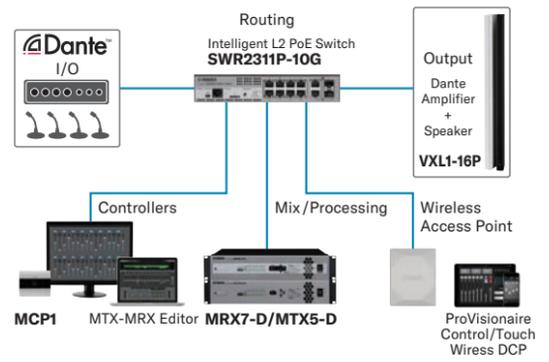For increased SPL and extra projection.

Vertical Coupling (option)

Horizontal Coupling
For increased SPL and more focused coverage that can minimize unwanted reflections from nearby surfaces.

24+24 (H)
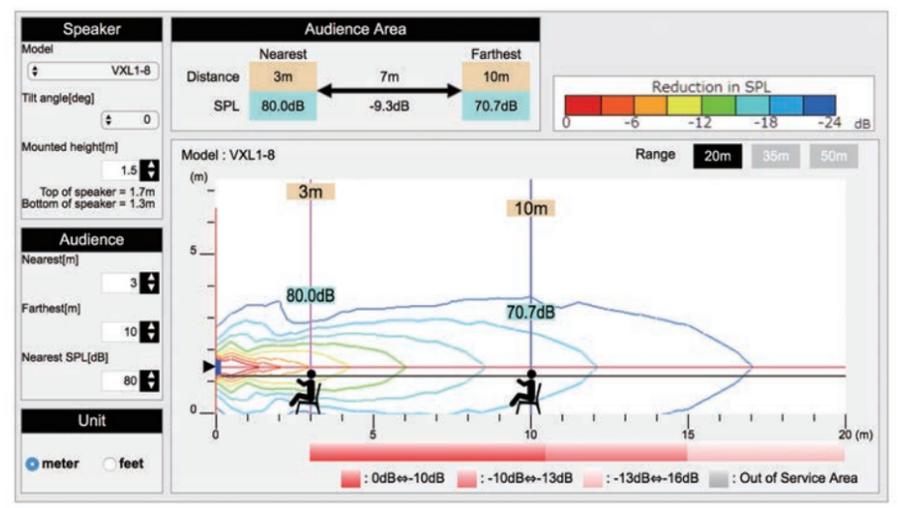16+16 (H)
8+8 (H)

Horizontal Coupling (option)

Dante+PoE Solution (VXL1-16P)

With audio distributed via a Dante network and PoE power supplied from a PoE compliant L2 switch, the speaker system can be constructed as a network. Simple wiring via LAN cables, easy installation, and no need for a power amp contribute to the flexibility of installation, allowing you to construct an elegant space-saving sound system.

Dante I/O

Routing
Intelligent L2 PoE Switch
SWR2311P-10G

Output
Dante Amplifier + Speaker
VXL1-16P

Controllers   Mix/Processing   Wireless Access Point

MCP1   MTX-MRX Editor   **MRX7-D/MTX5-D**   ProVisionaire Control/Touch Wiress DCP

VXL Selection Assistant

VXL Selection Assistant is a dedicated app available for free on Yamaha website, which is intended to assist the selection of the most appropriate VXL speaker model for speech reproduction applications. The App will provide an indication of whether good amplified sound can be provided across the audience area by calculating the difference in SPL between the nearest and furthest audience members. Good amplified sound can be expected if the SPL range across the audience area is within 10 dB.

Speaker		Audience Area			
Model	VXL1-8		Nearest	7m	Farthest
		Distance	3m		10m
Tilt angle[deg]	0	SPL	80.0dB	-9.3dB	70.7dB

Reduction in SPL
0   -6   -12   -18   -24   dB

Model : VXL1-8

3m   10m
80.0dB   70.7dB

Range   20m   35m   50m

: 0dB↔-10dB   : -10dB↔-13dB   : -13dB↔-16dB   : Out of Service Area

The following shows a quick reference guide for appropriate selection of the VXL series.

	Distance D
VXL1-8	9.5m (31 feet)
VXL1-16	13.5m (44 feet)
VXL1-24	25m (82 feet)

*Distance from the speaker to the nearest audience: 3m
*Distance from the floor to the bottom of the speaker: 1.1m

For much larger space, the use of double speakers in vertical coupling is recommended.

	Distance D
VXL1-16 + VXL1-16	33m (108 feet)
VXL1-24 + VXL1-16	42m (138 feet)
VXL1-24 + VXL1-24	46m (151 feet)

*Distance from the speaker to the nearest audience: 4m
*Distance from the floor to the bottom of the speaker: 1.1m
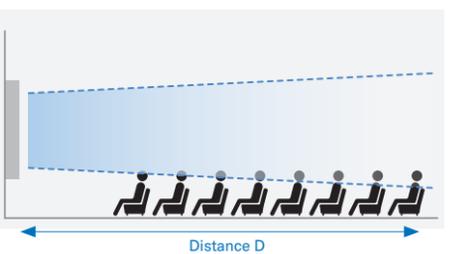
Distance D

D: Distance from the speaker to the farthest audience*

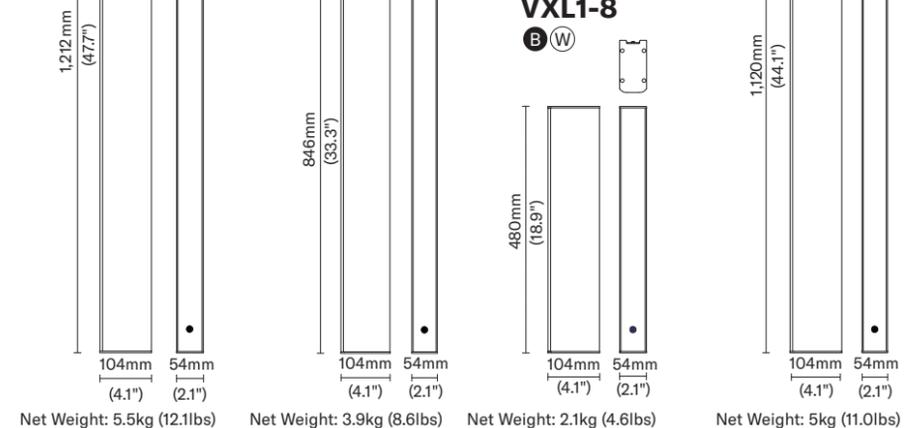*The SPL difference between the nearest and the farthest is within 10dB SPL.

Product Dimensions

VXL1-24
Ⓑ Ⓦ
1,212mm (47.7")
104mm (4.1") | 54mm (2.1")
Net Weight: 5.5kg (12.1lbs)

VXL1-16
Ⓑ Ⓦ
846mm (33.3")
104mm (4.1") | 54mm (2.1")
Net Weight: 3.9kg (8.6lbs)

VXL1-8
Ⓑ Ⓦ
480mm (18.9")
104mm (4.1") | 54mm (2.1")
Net Weight: 2.1kg (4.6lbs)

VXL1-16P
Ⓑ Ⓦ
1,120mm (44.1")
104mm (4.1") | 54mm (2.1")
Net Weight: 5kg (11.0lbs)

*Dedicated mounting bracket is included in each model.

Optional Accessories

Accessories	Installation	VXL1-24	VXL1-16	VXL1-8	VXL1-16P	Description
Default (Supplied bracket) Ⓑ Ⓦ		✓	✓	✓	✓	For seamless wall mounting. This bracket does not allow angle adjustment.
WMB-L1 Ⓑ Ⓦ		✓	✓	✓	✓	Bracket for 2-axis adjustment of a single array.
VCB-L1 Ⓑ		✓	✓	N/A	N/A	Bracket for vertical mounting of two arrays, for increased SPL and extra projection.
VCSB-L1 Ⓑ Ⓦ		✓ with VXL1-16 VXL1-24	✓ with VXL1-16 VXL1-24	N/A	N/A	Bracket for 2-axis adjustment of a two vertically linked arrays. The VCB-L1 and WMB-L1 are used together.
HCB-L1 Ⓑ		✓ with VXL1-24	✓ with VXL1-16	✓ with VXL1-8		Bracket for side-by-side mounting of two arrays, for increased SPL and more focused horizontal dispersion that can minimize unwanted reflections from nearby surfaces.
PA-L1 Ⓑ		✓	✓	✓	✓	Bracket for pole mounting. Suitable pole size Ø35 mm.
ST-L1 Ⓑ Ⓦ		✓	✓	✓	N/A	Transformer box for high-impedance connections. Ideal for multiple speaker layouts.

VXL1-16 with supplied bracket

VXL1-16s in vertical coupling with WMB-L1, VCB-L1, VCSB-L1

VXL1-16s in horizontal coupling with WMB-L1, HCB-L1

Specifications

Standard | PoE

VXL1-24 | VXL1-16 | VXL1-8 | VXL1-16P

VXL series			VXL1B-24/VXL1W-24	VXL1B-16/VXL1W-16	VXL1B-8/VXL1W-8	VXL1B-16P/VXL1W-16P
Speaker type			Full-range, Bass reflex	Full-range, Bass reflex	Full-range, Bass reflex	Full-range, Bass reflex Powered speaker (PoE)
Components	LF		1.5˝ x 24	1.5˝ x 16	1.5˝ x 8	1.5˝ x 16
	HF					
Frequency range (-10dB)	Without port cover		77Hz - 20kHz	81Hz - 20kHz	70Hz - 20kHz	80Hz - 20kHz
	With port cover		98Hz - 20kHz	108Hz - 20kHz	110Hz - 20kHz	80Hz - 20kHz
Nominal coverage (Horizontal x Vertical)	Normal model		H170° x V15° (+7.5 / -7.5）	H170° x V25° (+12.5 / -12.5）	H170° x V40° (+20 / -20）	H170° x V25° (+12.5 / -12.5）
	Wide mode		H170° x V20° (+7.5 / -12.5）	H170° x V30° (+12.5 / -17.5）	-	-
Power rating	NOISE		110W	80W	40W	-
	PGM		220W	160W	80W	-
	PEAK		440W	320W	160W	-
Nominal impedance			8Ω	12Ω	16Ω	-
Transformer tap	100V		With an optional transformer box (ST-L1): 60W, 30W, 15W			-
	70V		With an optional transformer box (ST-L1): 60W, 30W, 15W, 7.5W			-
Amplifier type						Class-D
Power rating (Amp)	Dynamic		-			15W (PoE + (IEEE 802.3 at)), 6W (PoE (IEEE 802.3 af))
	Continuous		-			15W (PoE + (IEEE 802.3 at)), 6W (PoE (IEEE 802.3 af))
SPL	Sensitivity (1W, 1m)		91dB SPL (Half-space)	91dB SPL (Half-space)	89dB SPL (Half-space)	-
	Peak (Calculated, 1m)		117dB SPL	116dB SPL	111dB SPL	102dB SPL**
I/O connectors			Euroblock (2 pin)	Euroblock (2 pin)	Euroblock (2 pin)	RJ45 (Dante)
Magnetically shielded			No			
Protection	Overload protection		Full-range power limiting to protect network and transducers			-
	Speaker processing		-			Clip limiting, Integral power protection
	Amplifier protection		-			Over current protection, Over temperature protection, Under voltage lock out, DC detection, Clock detection
	Power supply protection		-			Over load protection, Over voltage protection, Under voltage lock out
Cooling			-			Natural convection
Power requirements			-			PoE + (IEEE 802.3at), PoE (IEEE 802.3af)
Power consumption			-			Idle: 3W
			-			1/8 (Pink Noise): 6W (PoE+ (IEEE 802.3at)), 4.3W (PoE (IEEE 802.3af))
Enclosure material	Cabinet		Aluminum extrusion cabinet			
	Bottom board		ABS (UL94 5VB)			
Grille material			Powder coated perforated aluminum			
Finish	Black model		Munsell N3 / RAL 9017 (approx.)			
	White model		Munsell N9 / RAL9010 (approx.)			
Dust and water resistance (IP rating)			IP34*	IP34*	IP33*	-
Dimensions			W54mm (2.1˝) x H1212mm (47.7˝) x D104mm (4.1˝)	W54mm (2.1˝) x H846mm (33.3˝) x D104mm (4.1˝)	W54mm (2.1˝) x H480mm (18.9˝) x D104mm (4.1˝)	W54mm (2.1˝) x H1120mm (44.1˝) x D104mm (4.1˝)
Net weight			5.5kg (12.1lbs)	3.9kg (8.6lbs)	2.1kg (4.6lbs)	5.0kg (11.0lbs)
Packaging			Single	Single	Single	Single
Certificate			CE, RoHS	CE, RoHS	CE, RoHS	CE, RoHS

* IP35 with port cover
** Measured at 2 m; value converted to 1 m is shown (frequency range: 100Hz – 10kHz) ; IEC noise