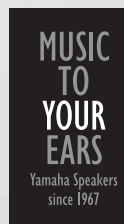


SPEAKERS FOR COMMERCIAL INSTALLATIONS

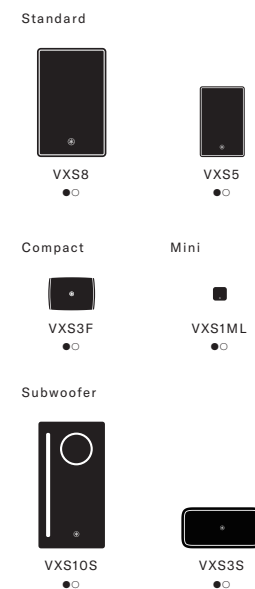


1. High quality, richly musical sound
2. Visual design that harmonizes with any interior décor
3. Installation-friendly smart mechanical features

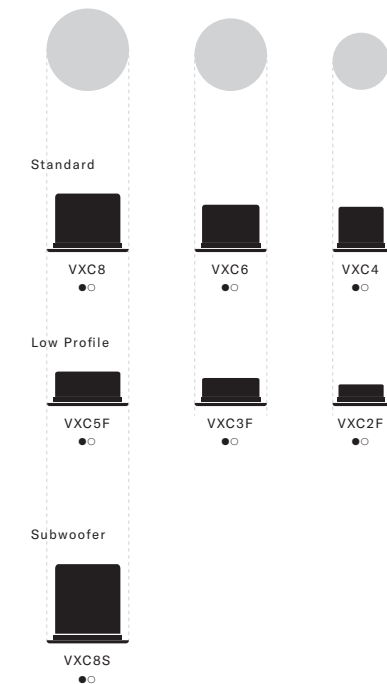


VXS, VXC and VXL series speakers have been optimized specifically for commercial sound applications, with accurate sound inspired by our long history of musical instrument production plus visual design that blends easily with any décor. Choose the models that best suit your needs from our ample lineup.

Surface-mount Speakers/Subwoofers
VXS SERIES



In-ceiling Speakers/Subwoofers
VXC SERIES



Column-type Line Array Speakers
VXL SERIES



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 SETS 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)



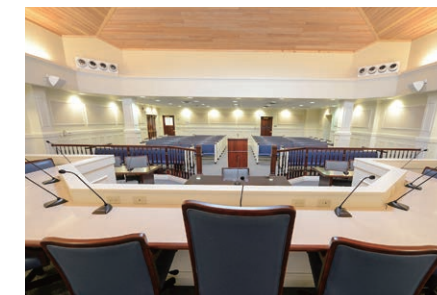
Thermes Marins Monte-Carlo (Spa, Monaco)



Victoria & Albert (Museum, UK)



Shang Xia (Boutique, China)



Stone Harbor Municipal Courthouse (Courthouse, USA)



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



Scalaria (Hotel, Austria)



Walkerhill Hotel & Resort (Hotel, Korea)



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.

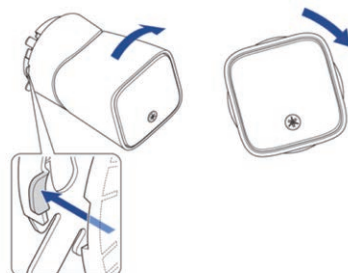


Reverse-thread screws and safety pin prevent damage or injury due to the speaker accidentally falling during installation.



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



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.



+

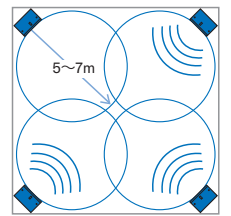


VXS3S

Tips for System Design & Installation

Speaker Layout

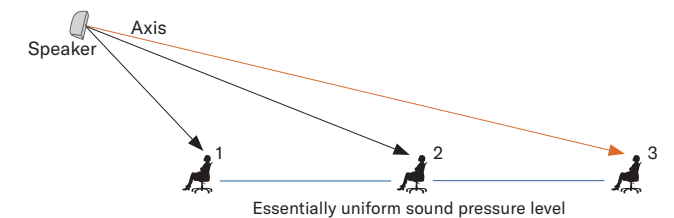
The coverage area of surface-mount speakers will depend on the mounting height rather than ceiling height. With surface-mount speakers installed at a height of around 3 meters, the coverage area will be somewhere between 5 and 7 meters, as shown in the below figure.



Speaker mounting position: around 3m height

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.

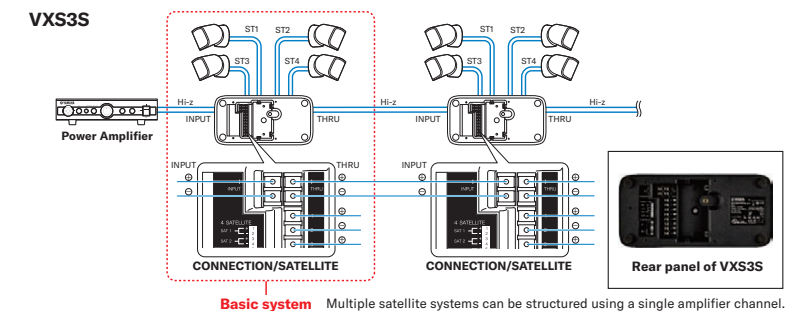
Uniform sound pressure level can easily be achieved throughout the listening plane with speakers that include by aligning the speaker's axis with the head of the most distant target (listener). This works because of the relationship between distance and coverage angle. When the perpendicular axis is 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.



*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.



Surface-mount Speakers/Subwoofers

VXS SERIES

Standard



VXS8



VXS5

Compact



VXS3F

Mini



VXS1ML

Subwoofer



VXS10S

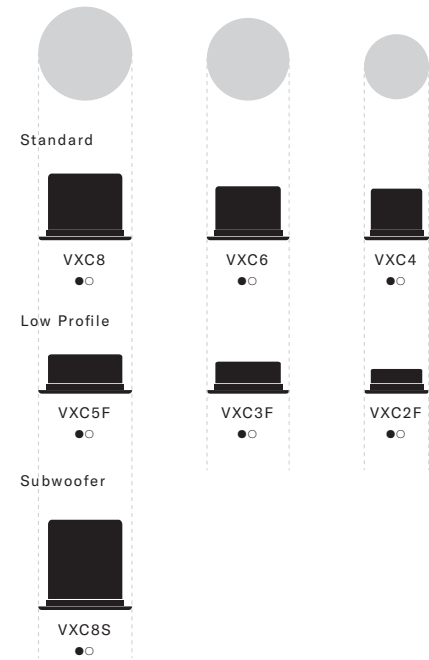


VXS3S

Recommended for
Background Music System

In-ceiling Speakers/Subwoofers

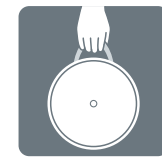
VXC SERIES



Recommended for
Background Music System

Smart Design for Safer, Faster Installation

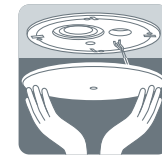
The VXC ceiling speakers come with smart mechanical features that contribute to significantly safer, faster installation. And since these models support both low-impedance and high-impedance connection, the need for extra stock is minimized and systems can be designed to ideally meet the requirements 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.



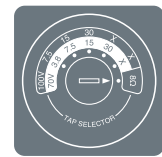
Fast
Double threaded screws used for the speaker clamp mechanism allow the clamps to be tightened twice as fast as conventional screws.



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



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.



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



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

Carrying Band



Anti-Drop Tab



Featured Model

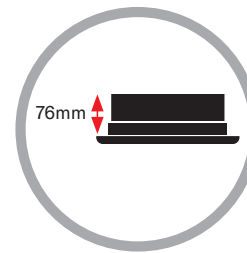
Style and Substance.

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.

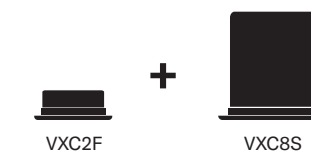
Super Slim Back Can

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



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.



Streamlined Design

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



Pendant-mount Option

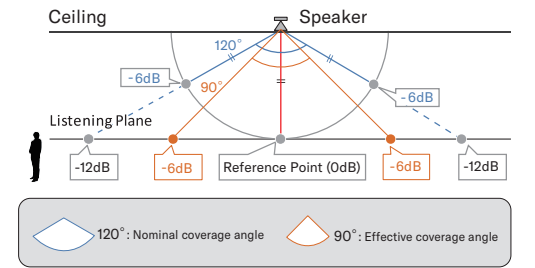
Suspension hardware and loudspeaker cosmetic cover designed for hanging from open ceilings.



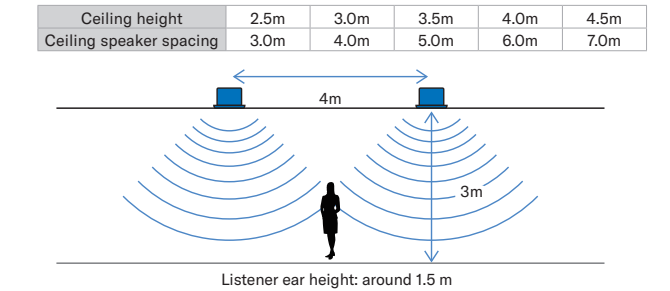
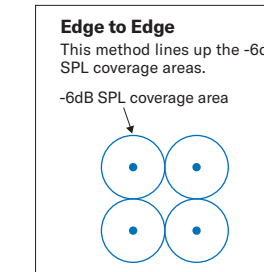
Tips for System Design & Installation

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.

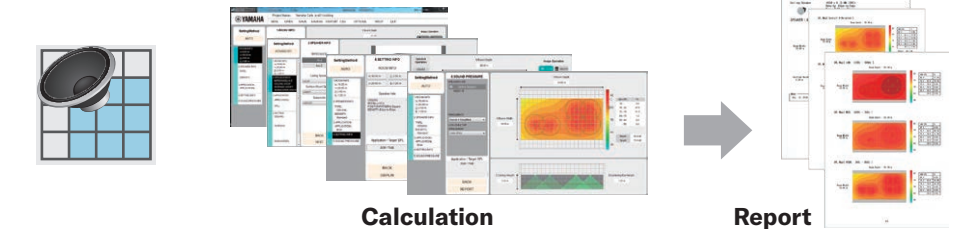


A number of methods can be employed when laying out speaker coverage areas. The "Edge to Edge" method is normally used for background music systems. The chart lists approximate coverage areas at a number of ceiling heights for standing listeners (listener ear height = around 1.5 meters). If the ceiling 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.



CISSCA

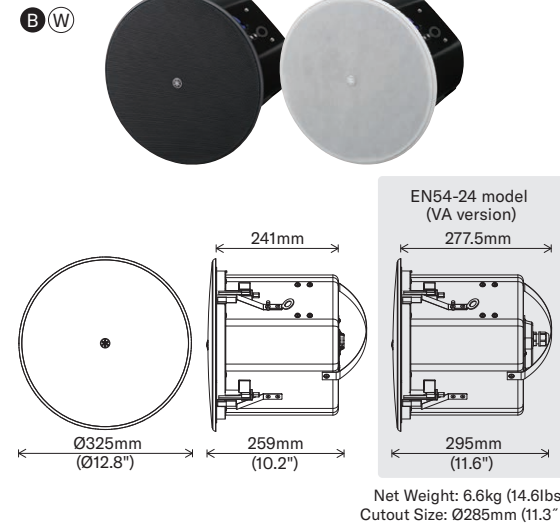
CISSCA, the Commercial Installation Solutions Speaker Calculator, is a Yamaha's dedicated software application that rapidly calculates the number of speakers required for optimum performance in installations, based on the size of the room, type of system, type of speakers, and speaker layout pattern. 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.



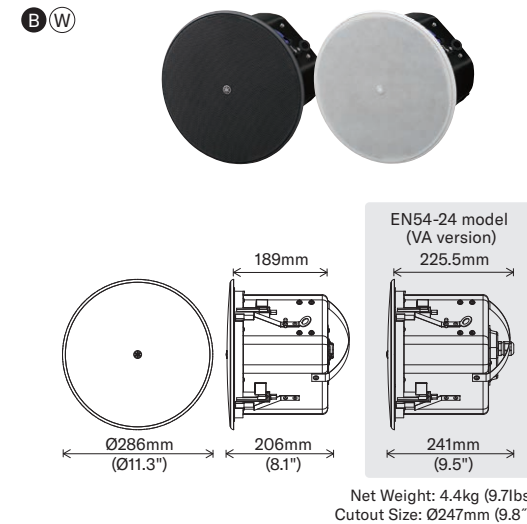
Calculation

Report

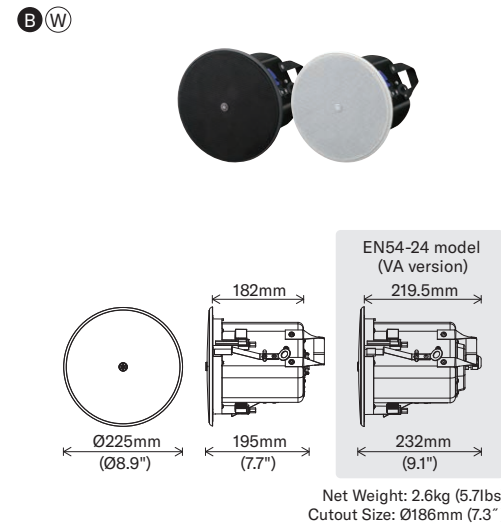
VXC8



VXC6



VXC4



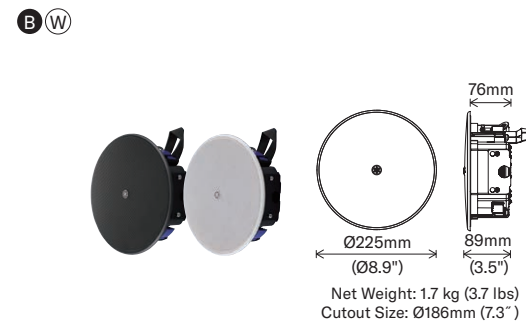
VXC5F



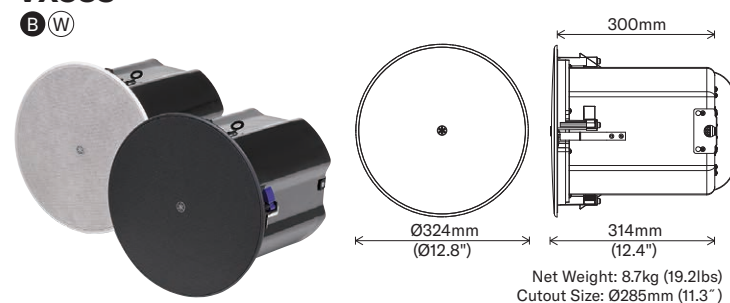
VXC3F



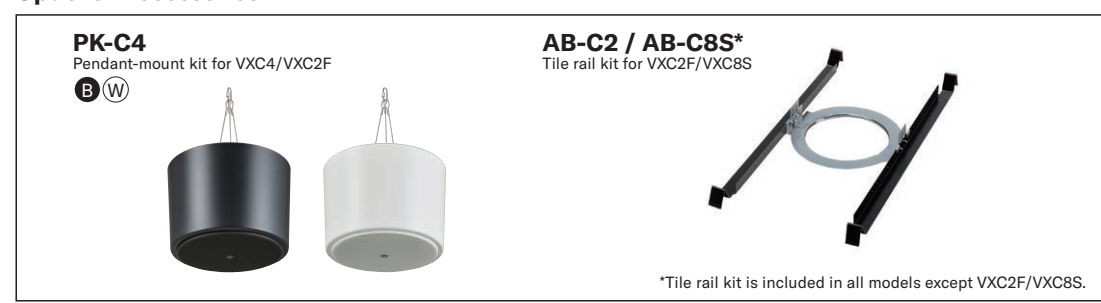
VXC2F



VXC8S



Optional Accessories



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

Standard

Low Profile

Subwoofer



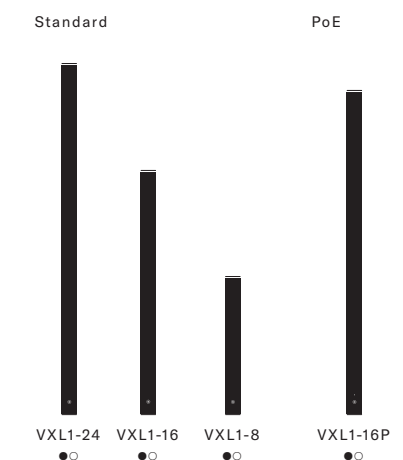
VXC series	VXC8/VXC8W		VXC6/VXC6W		VXC4/VXC4W		VXC5F/VXC5FW		VXC3F/VXC3FW		VXC2FB/VXC2FW	VXC8SB/VXC8SW		
	VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)		VA version* (EN54-24 model)					
Speaker type	2-way, Acoustic suspension		2-way, Acoustic suspension		Full-range, Bass reflex		Full-range, Bass reflex		Full-range, Bass reflex		Full-range, Bass reflex	Subwoofer, Band pass		
Components	LF 8"	HF 1"	LF 6.5"	HF 0.75"	4"		4.5"		3.5"		2.5"	8"		
Crossover frequency	3kHz		3.2kHz		-		-		-		-	-		
Frequency range (-10dB)	55Hz - 20kHz		56Hz - 20kHz		80Hz - 20kHz		60Hz - 20kHz		71Hz - 20kHz		67Hz - 20kHz	44Hz - 200Hz		
Nominal coverage (Conical)	100°		110°		130°		130°		140°		160°	-		
Power rating	NOISE 90W	PGM 180W	NOISE 75W	PGM 150W	NOISE 30W	PGM 60W	NOISE 40W	PGM 80W	NOISE 20W	PGM 40W	NOISE 15W	PGM 30W	NOISE 100W	
	PEAK 360W		PEAK 300W		PEAK 120W		PEAK 160W		PEAK 80W		PEAK 60W	PEAK 400W		
Nominal impedance	8Ω		8Ω		8Ω		8Ω		8Ω		8Ω	8Ω		
Transformer tap	100V	60W, 30W, 15W	100V	60W, 30W, 15W	70V	30W, 15W, 7.5W	70V	30W, 15W, 7.5W	70V	15W, 7.5W, 3.8W	70V	15W, 7.5W, 3.8W, 1.9W	70V	60W, 30W, 15W, 7.5W
	70V	60W, 30W, 15W, 7.5W	70V	60W, 30W, 15W, 7.5W	70V	30W, 15W, 7.5W, 3.8W	70V	30W, 15W, 7.5W, 3.8W	70V	15W, 7.5W, 3.8W, 1.9W	70V	15W, 7.5W, 3.8W, 1.9W, 1W	70V	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)	87dB SPL (Half-space)	87dB SPL (Half-space)	87dB SPL (Half-space)	86dB SPL (Half-space)	86dB SPL (Half-space)	88dB 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	104dB SPL	114dB 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	Steel	ABS (UL94 V-0)	ABS (UL94 V-0)	ABS (UL94 V-0)	ABS (UL94 V-0)	ABS (UL94 V-0)	Steel	Steel		
	Baffle	HIPS	HIPS	HIPS	HIPS	ABS (UL94 V-0)	ABS (UL94 V-0)	ABS (UL94 V-0)	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 D89mm (3.5")	Ø324mm (12.8") x D314mm (12.4")		
Net weight	6.6kg (14.6lbs)	4.4kg (9.7lbs)	4.4kg (9.7lbs)		2.6kg (5.7lbs)		3.1 kg (6.8 lbs)		2.5 kg (5.5 lbs)		1.7kg (3.7lbs)	8.7kg (19.2lbs)		
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, 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	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.



Column-type Line Array Speakers

VXL SERIES



Recommended for
Speech/Presentation System



Sleek. Smart. Sound.

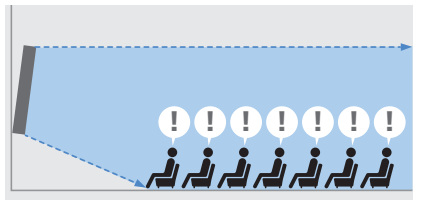
Blending Quality Sound with Visual Elegance

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.



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

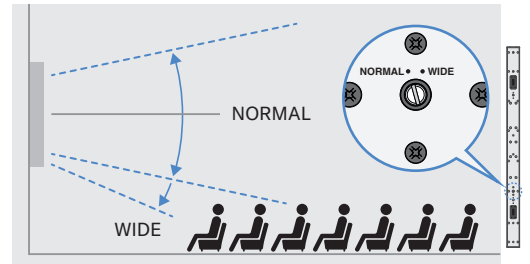
With line-array speakers the per-unit output is smaller than with point-source speakers, meaning that a microphone positioned nearby picks up less sound energy.



Tips for System Design & Installation

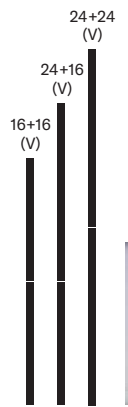
Vertical Coverage Expansion

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.



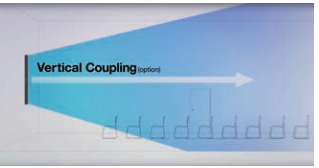
*VXL1-8's vertical dispersion is fixed

Double Speakers



Vertical Coupling

For increased SPL and extra projection.



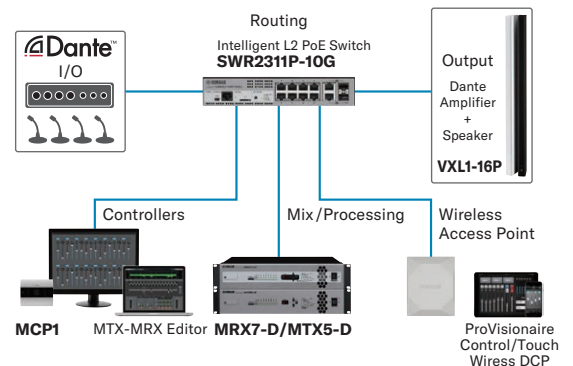
Horizontal Coupling

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



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.



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.

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

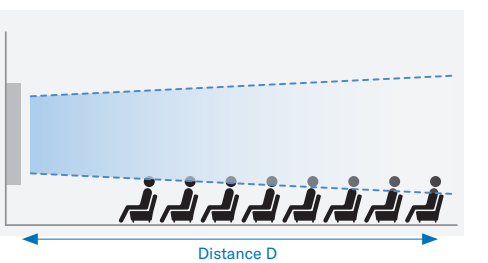
Model	Distance D
VXL1-8	9.5m (31 feet)
VXL1-16	13.5m (44 feet)
VXL1-24	25m (82 feet)

*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.

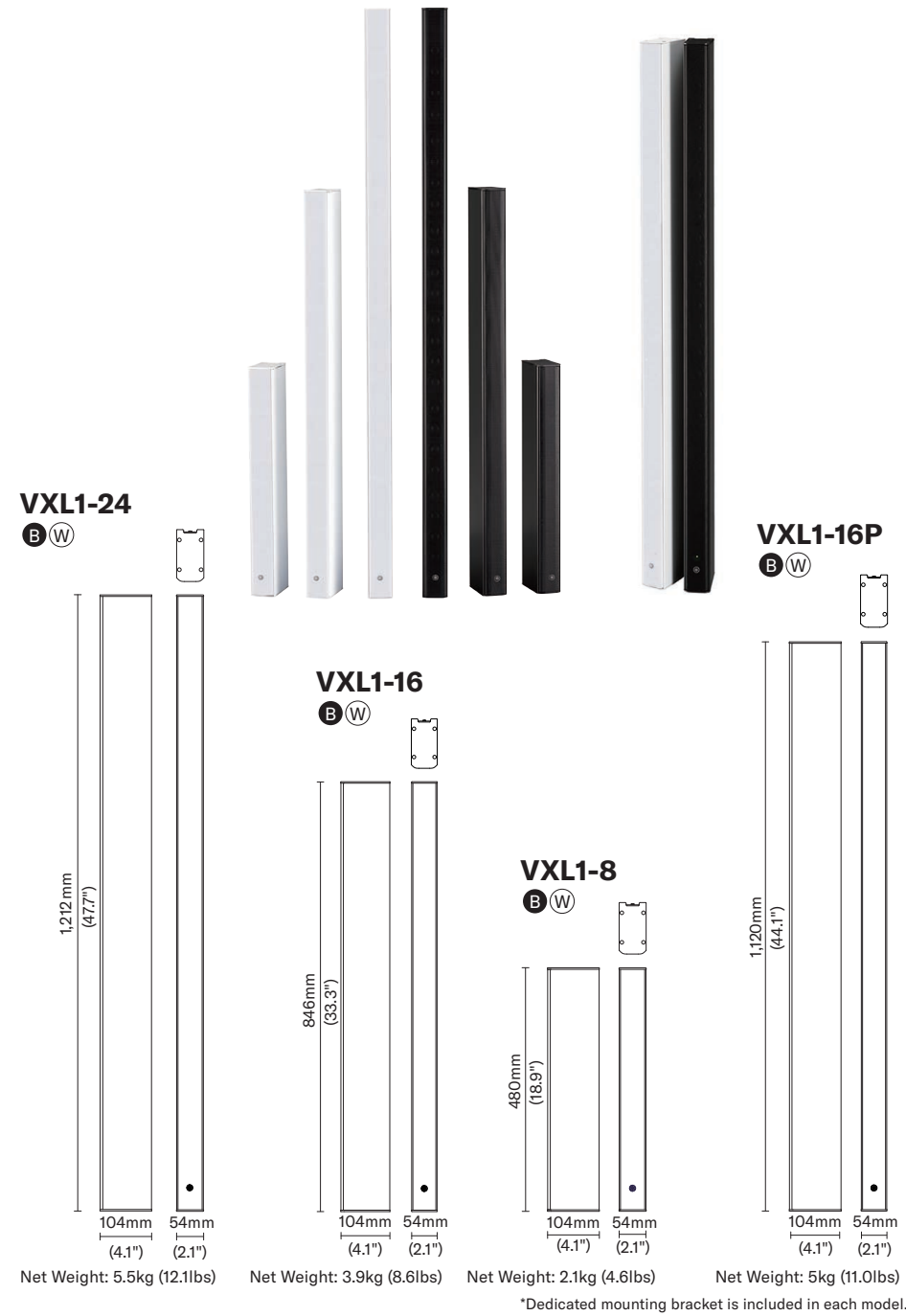
Model	Distance D
VXL1-16 + VXL1-16	33m (108 feet)
VXL1-24 + VXL1-16	42m (138 feet)
VXL1-24 + VXL1-24	46m (151 feet)

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



D: Distance from the speaker to the farthest audience*

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



Optional Accessories

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



VXLI-16 with supplied bracket



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



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

Standard



VXLI-24



VXLI-16



VXLI-8

PoE



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