



WS SERIES

WS-15T/30T/50T/80T

Professional Compact
Indoor/Outdoor Loudspeaker
for Background/Foreground Music



interM



WS-Series is...

All new WS Series is the Installation Speaker which is weather resistant and it also brightens the venue with its elegant design. The speakers can be used in various applications from small-sized venues to mid/large-sized venues. To be specific, it particularly fits in facilities that high quality of background music is playing a crucial role (cafes and hotel lobby etc.), educational facilities(auditorium and conference room etc.) and cultural facilities(exhibition hall etc.)

WS Series is composed of 4 models from 2.5" Full-Range unit installed compact-sized WS-15T to 6.5" 2way model WS-80T. The Series has been applied with newly developed Full-Range unit, HF driver and LF driver unit to provide high-power clear sound without distortion. Moreover, 2way model adopts asymmetric horn design to over audience area perfectly. With the speaker taps on the rear panel of the every WS Series model, 100 V line/70 V line and low impedance (8 Ω) output can be adjusted. WS Series has obtained IP rate of 54 which enables to be used in various indoor and outdoor applications. Install with provided steel-made durable U bracket and even better with the Knuckle Bracket. Now, experience Inter-M's modern the WS Series with both eyes and ears!

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FEATURES

A Selection of Line-up

The WS Series is 4 models with different sizes and output ranges to suit various purposes. Sizes are from 2.5" to 4", 5" and 6.5" and output of 15 W, 30 W, 50 W and 80 W are available. Plus, there are black and white color available which even gives you more options to satisfy your needs!



WS-15T

15 W, 2.5", 82 dB SPL
1 Way Full Range



WS-30T

30 W, 4", 86 dB SPL
2 Way Passive



WS-50T

50 W, 5", 87.3 dB SPL
2 Way Passive



WS-80T

80 W, 6.5", 88 dB SPL
2 Way Passive

70V/100V Multi-tap Transformer

It is designed of high/low impedance to be used in any countries around the world. Multi Taps in 100 V line/70 V line and low impedance(8 Ω) output have been adopted and can provide clear background and foreground music play suitable for any type of applications.

		WS-15T	WS-30T	WS-50T	WS-80T
LOW		8 Ω	8 Ω	8 Ω	8 Ω
HIGH	100V	15/8/4/2 W	30/15/7.5/3.8/1.9 W	50/25/13/6.5/3.3 W	80/40/20/10/5 W
	70V				

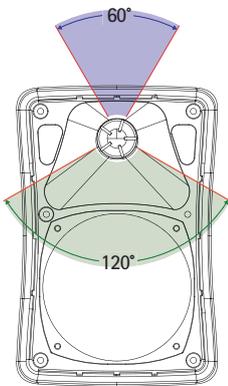


Compact Size with High Power

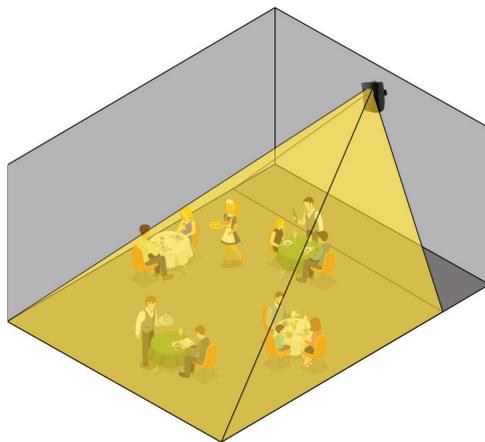
Depending on the sizes, the series provides high output just with a small unit using 1Way Full Range(WS-15T) or 2Way Passive(WS-30T/50T/80T) speaker system.

Asymmetric Horn for the Optimized Sound System

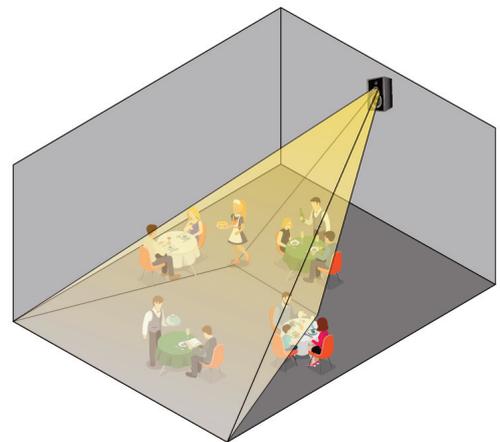
The asymmetric horn design(except for the WS-15T) of WS Series covers a wider space with clear sound. With Horizontal Coverage Near Field 120° and Far Field 60° for long distance and Vertical Coverage upward +20° downward -40°(on axis) for nearby wide area and it can deliver clear and even sound without having to do unnecessary tilting installation. Plus, EASE and EASE Focus Simulation data is provided to conduct 3D Simulation to design optimized sound system by predicting distribution map of sound pressure and clarity.



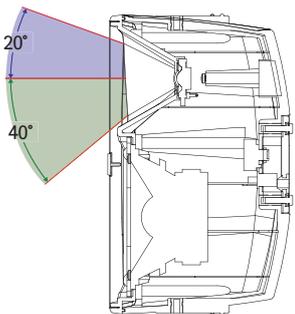
Horizontal Coverage



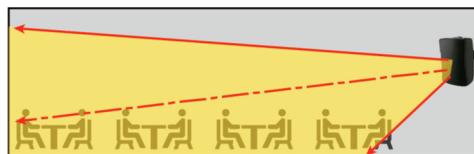
WS Speaker



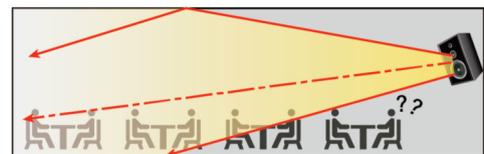
Ordinary Speaker



Vertical Coverage



WS Speaker



Ordinary Speaker

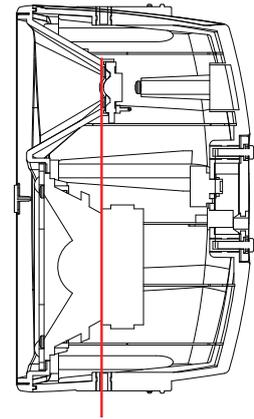
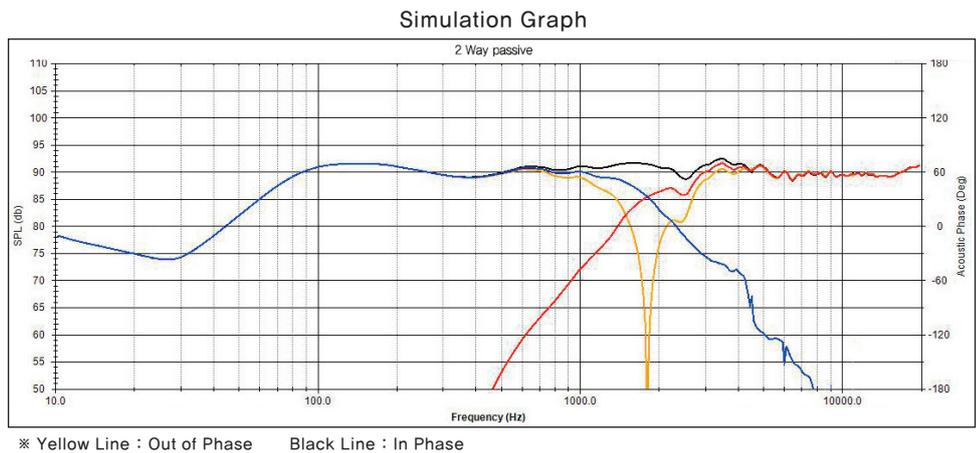
Weather Resistant Design

The design of WS Series is made to deliver output of the speaker most efficiently. It brightens the venues not only with its supreme quality sound but also elegant and modern design. Plus, WS Series has obtained IP rate of 54 which enables flexible installation indoors and outdoors.



Sound Quality of Professional Audio

WS Series provides clear and accurate sound with professional audio sound quality. The 2 way loudspeaker of the woofer and tweeter are located in the same physical plane which increases time alignment shifts, lobing and comb filter distortion, decreasing intelligibility. In the WS Series, the voice coil part of the woofer and the tweeter is physically offset. In this technique of the physical time alignment, the system eliminates the cause of lobe or small shift in polar response on axis at the crossover point.

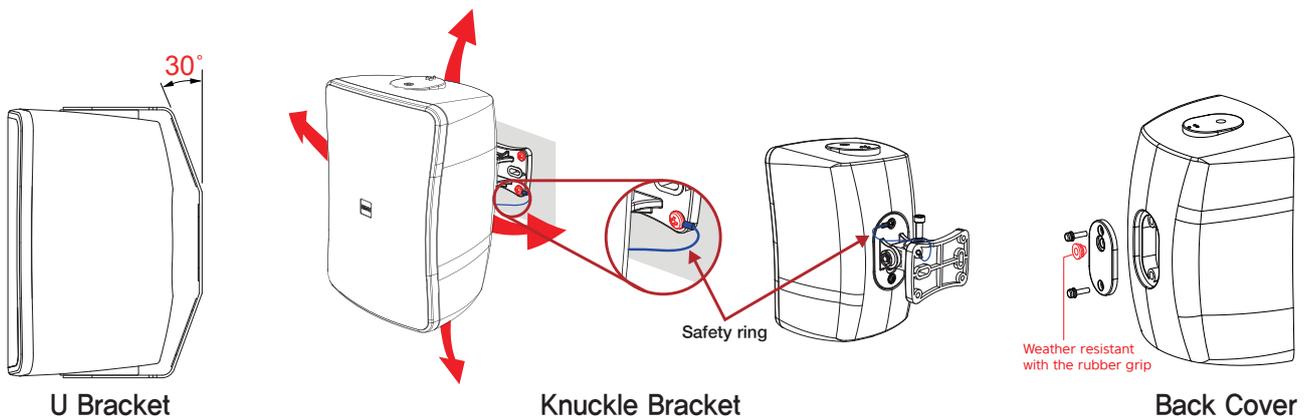


Physical Time Alignment Design

Ease of Installation

With the steel-made durable U bracket(30° tilted), the users can firmly place the speaker as they want. Moreover, Knuckle Bracket is supplied to turn the speaker left to right and up and down to better suit the needs. In that way, it can be flexibly installed in various venues and used in numerous applications.

※WS-15T : Knuckle Bracket provided but U Bracket unprovided



PRELIMINARY SPECIFICATION

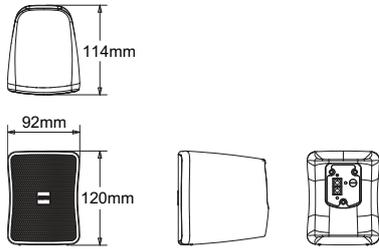
MODEL		WS-15T	WS-30T	WS-50T	WS-80T
Type		1 way full range	2 way passive	2 way passive	2 way passive
Frequency Range(-10 dB)		110 Hz~20 kHz	100 Hz ~20 kHz	100 Hz ~20 kHz	100 Hz ~20 kHz
Component	LF	2.5" full range	4"	5"	6.5"
	HF		VC 13 mm	VC 13 mm	VC 13 mm
Power Rating	Continuous (AES Std)*	15 W	30 W	50 W	80 W
	Program	30 W	60 W	100 W	160 W
	Peak	60 W	120 W	200 W	320 W
Sensitivity(1 m/1 W)		84 dB	85 dB	87 dB	90 dB
Maximum SPL(Peak)		102 dB	106 dB	110 dB	115 dB
Nominal Coverage(1 kHz)		90°	Asymmetric Horn Horizontal Coverage : Far Field 60°, Near Field 120° Vertical Coverage : upward +20°, downward -40° (On Axis)		
Nominal Impedance (THRU setting)		8Ω			
Transformer Taps	70 V	15/8/4/2 W	30/15/7.5/3.8/1.9 W	50/25/13/6.5/3.3 W	80/40/20/10/5 W
	100 V				
Low Frequency Transducer		Paper Cone with impregnation	Polypropylene Cone (PP cone) High stiffness compare to paper cone, low distortion, flat frequency response, low vibration mode than paper cone		Paper Cone with impregnation
High Frequency Transducer		-	Polyethyleneimine (PEI semidome) High frequency extend with diffuser		
Enclosure Material		ABS RESIN			
Connectors		Screw terminal 2P			
Agency Rating		ROHS-compliant			
Weather Resistant		TBD	IP54 rating		TBD
Colors		Black/White			
Dimensions (W x H x D)		92x120x114 mm 3.6x4.7x4.5 in	139x210x129 mm 5.5x8.3x5.1 in	173x250x150 mm 6.8x9.8x5.9 in	210x311x169 mm 8.3x12.2x6.7 in
Weight		0.9 kg / 1.98 lb	1.72 kg / 3.79 lb	2.37 kg / 5.22 lb	3.57 kg / 7.87 lb
Mounting Hardware (Selectable)	U Bracket	-	U-BKT-30	U-BKT-50	U-BKT-80
	Knuckle Bracket	K-BKT-15	K-BKT-30		

* AES standard, one decade pink noise with 6 dB crest factor within device's operational band, free air. Standard AES 2 hr rating plus long-term 100 hr rating are specified for low-frequency transducers.

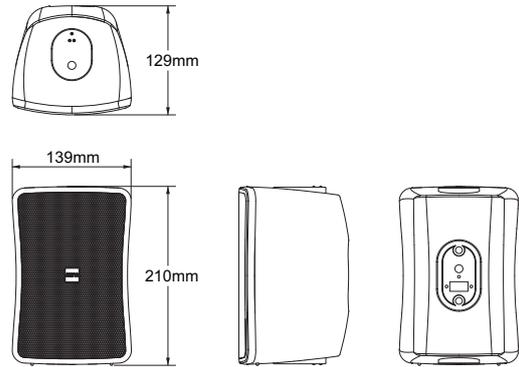
* Continuous program power is a conservative expression of the system's ability to handle normal speech and music program material and is defined as 3 dB above the Continuous Pink Noise Rating (IEC-shaped pink noise with a 6 dB crest factor, for 100 hours continuously).

DIMENSIONS

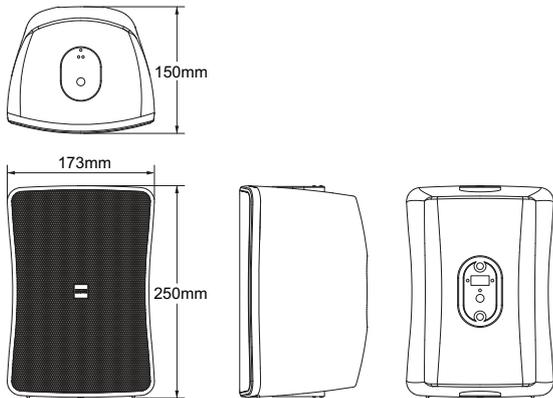
WS-15T



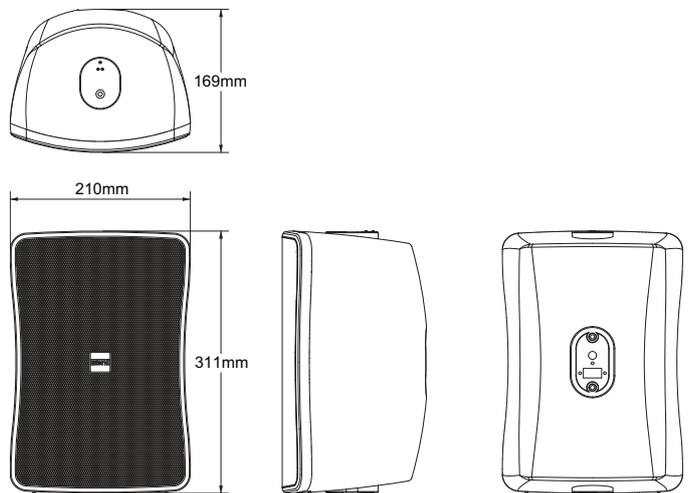
WS-30T



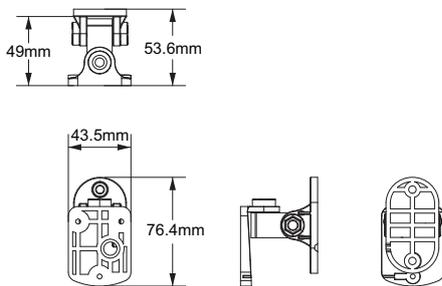
WS-50T



WS-80T



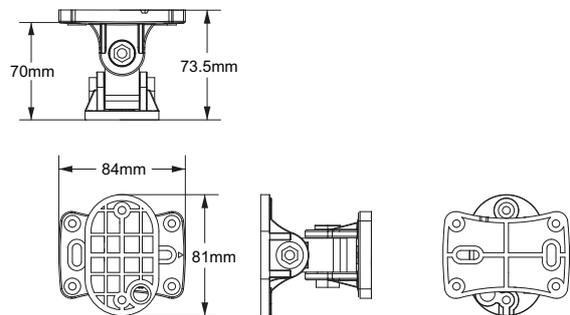
K-BKT-15 Knuckle Bracket (for WS-15T)



Tilt angle

Upper	Lower	Left	Right
60°	30°	56°	56°

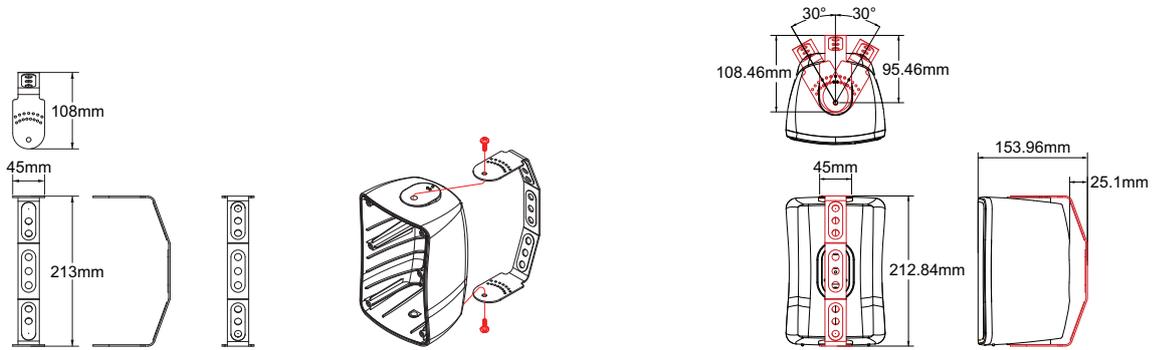
K-BKT-30 Knuckle Bracket (for WS-30T/50T/80T)



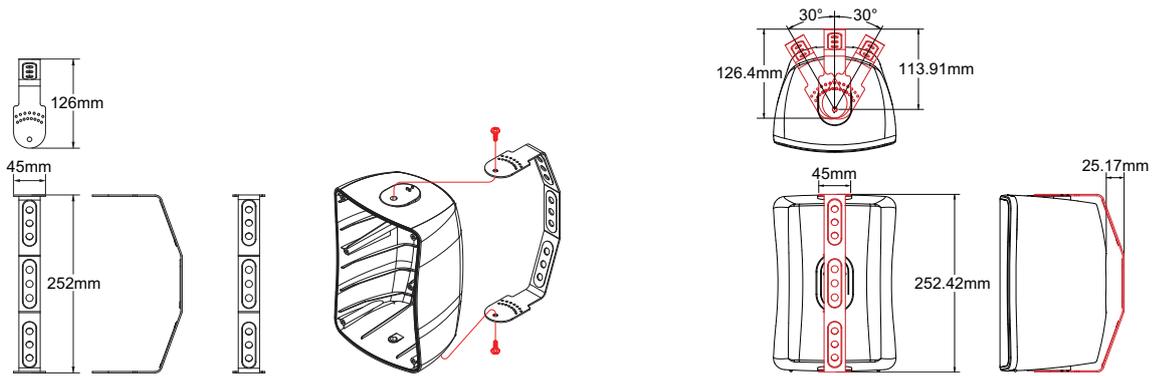
Tilt angle

Upper	Lower	Left	Right
35°	35°	55°	55°

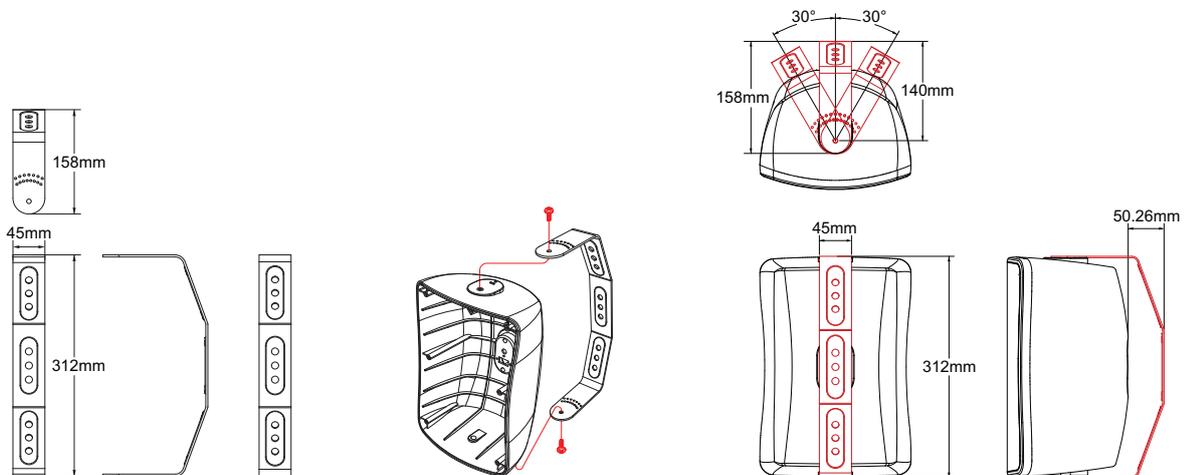
U-BKT-30 U Bracket (for WS-30T)



U-BKT-50 U Bracket (for WS-50T)



U-BKT-80 U Bracket (for WS-80T)





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※ Design and specification are subject to be changed for the improvement of product quality without pre notice. 2016. 3. V4