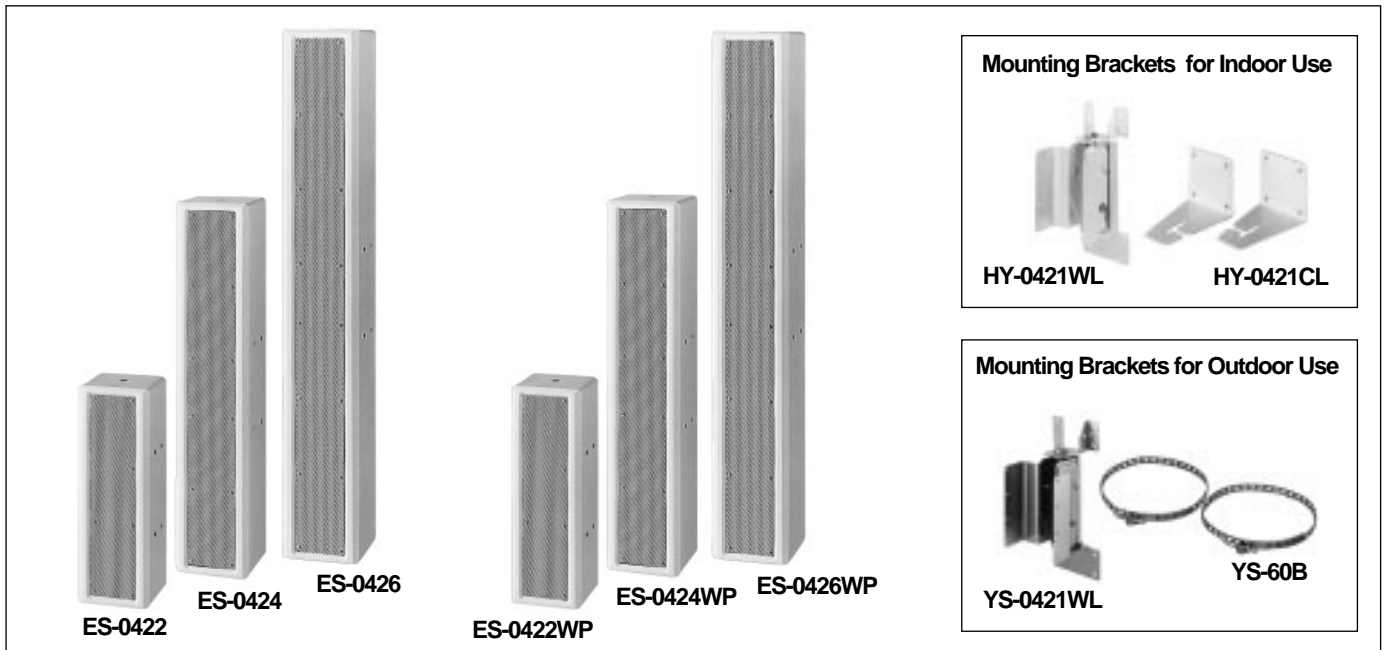


TOA PROFESSIONAL SOUND SYSTEM

Engineered Sound Speaker System

ES-0422/ES-0424/ES-0426: Indoor Use

ES-0422WP/ES-0424WP/ES-0426WP: Outdoor Use



DESCRIPTION

TOA's new ES-Series of indoor and outdoor speakers have been specially designed with slim enclosure proportions that provide an attractive complement—as well as excellent sound reproduction—for virtually any large-scale facility. Produced in three sizes for maximum versatility in a wide range of applications, their strong, high-quality sound characteristics make them ideal speakers for use in such varied locations as school grounds, playing fields and amusement parks. These speakers also provide clear sound definition in such large venues as gymnasiums and churches, which are often affected with long reverberations times that tend to drown out audio details. Outdoor type WP models feature a strong FRP exterior coating and solid construction to withstand the ravages of the elements.

Each compact unit mounts a set of 12 cm (4 3/4") cone woofers offering high power handling capability and a superb balance of sound. High-frequency output is delivered by a single CD horn that produces a wide, 100° x 50° area of clear sound dispersion. Its high-efficiency compression driver features a strong, responsive titanium diaphragm for brilliant highs. The ES-Series' assortment of mounting brackets ensure easy and secure installation on wall surfaces and poles, as well as horizontal mounting from walls and ceilings (indoor models only). Their special design also simplifies positioning adjustment.

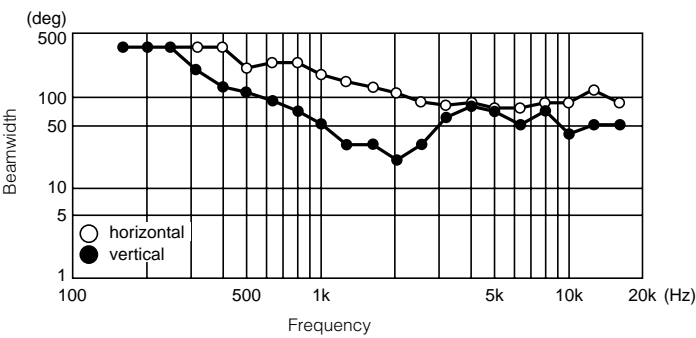
FEATURES

1. Slim enclosures deliver strong, high-efficiency sound output with high power handling capability from compact configurations. Simple, attractive design displays an unobtrusive, highly complementary look in a broad range of applications.
2. Narrow enclosures mount 12cm (4 3/4") wide-range, high-output cone speakers (ES-0422: 2; ES-0424: 4; ES-0426: 6) for strong low-to-midrange sound output, and single CD horn with powerful compression driver featuring responsive titanium diaphragm for brilliant highs over a wide 100° x 50° range of sound dispersion.
3. Frequency Response:
ES-0422 (WP): 120 – 20,000Hz with 91dB sensitivity
ES-0424 (WP): 120 – 20,000Hz with 95dB sensitivity
ES-0426 (WP): 120 – 20,000Hz with 96dB sensitivity
4. Indoor models constructed of painted wood with attractive perforated steel front grille. Outdoor WP models feature rugged, weather-resistant FRP coatings.
5. Indoor models feature large screw-type speaker cable terminals for easy and secure wiring. Outdoor WP models feature 2-meter length of speaker cable leading from waterproof connector.
6. Strong, specially designed HY-421WL indoor-type wall mount brackets and YS-421WL outdoor-type wall and pole mount brackets offer easy assembly and easy positioning adjustment. HY-421CL end-mount brackets designed for horizontal mounting of indoor speakers (Outdoor speakers designed for vertical mounting only).
7. Optional MT-S0601 Matching Transformer installs quickly and easily inside speaker enclosure behind detachable panel. Clip-on connectors facilitate installation and input impedance selection for 60 W, 30 W, 15 W and 7.5 W (70 V line only) operation.

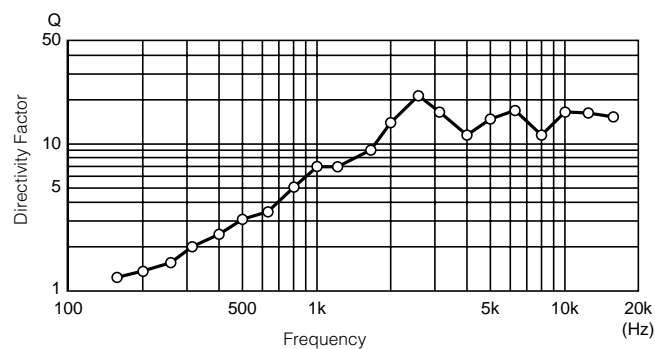


ES-0422/ES-0422WP CHARACTERISTIC DIAGRAMS

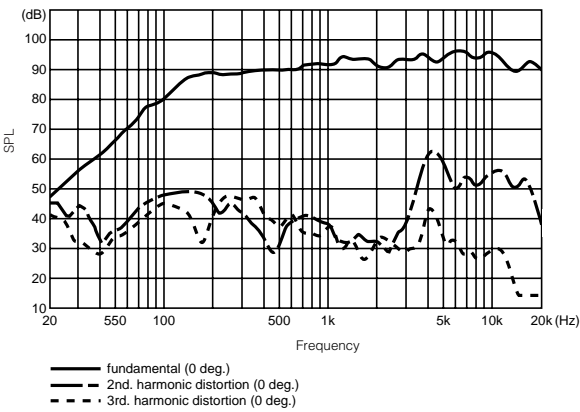
Beamwidth vs. Frequency



Directivity Factor vs. Frequency

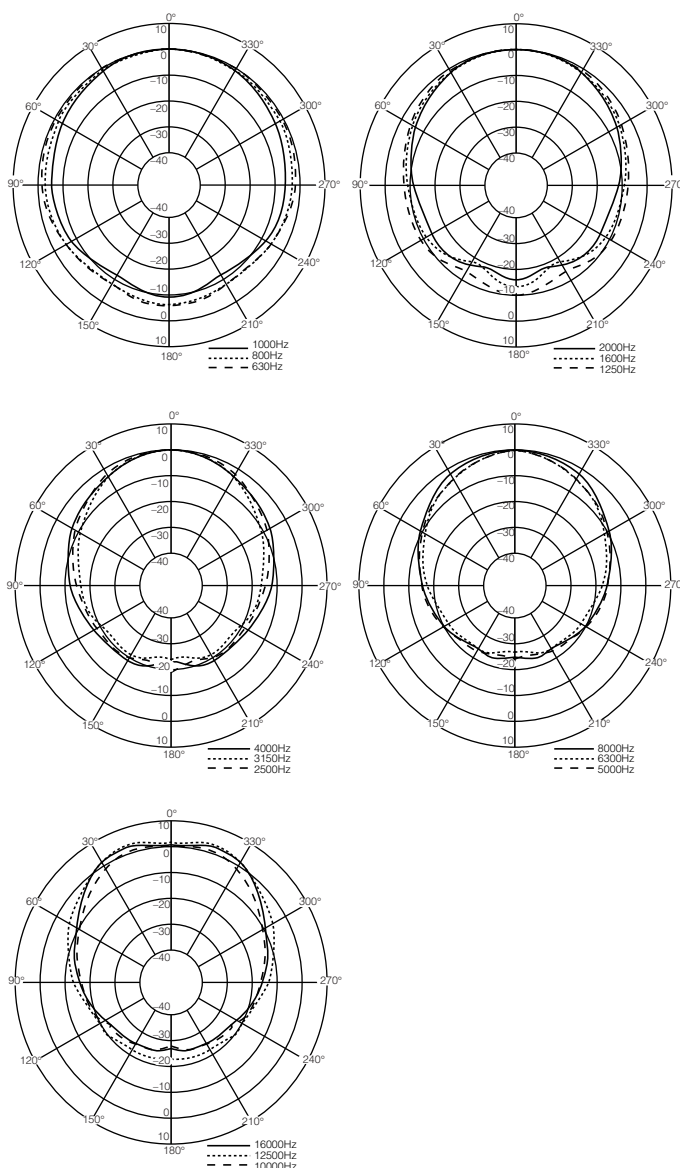


Frequency Response (1 W/1 m: 1/3 Octave Pink Noise)

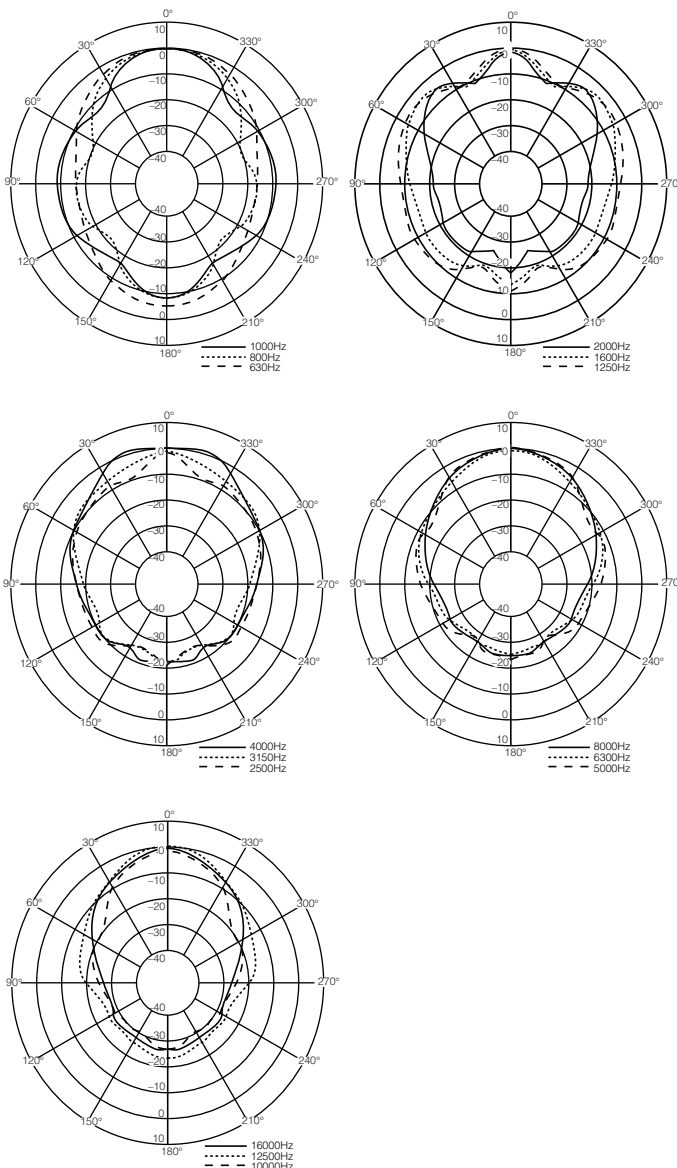


Polar Response

Horizontal

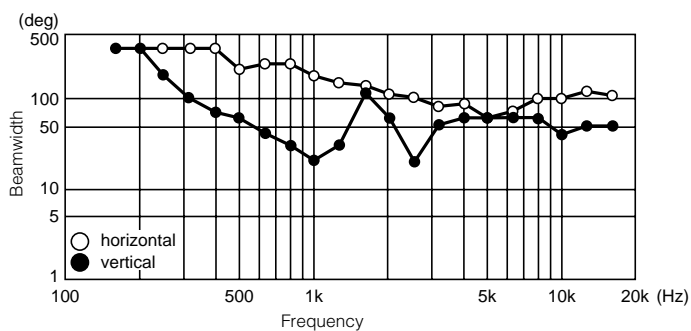


Vertical

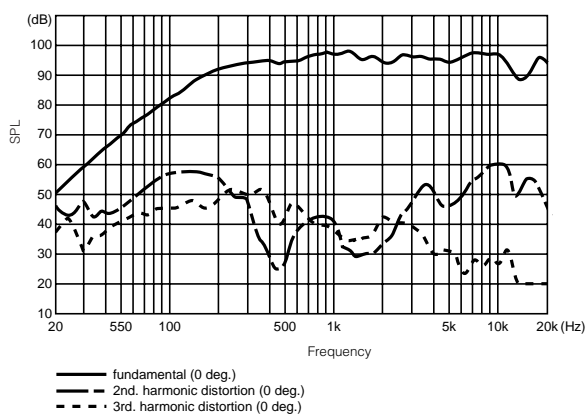


ES-0424/ES-0424WP CHARACTERISTIC DIAGRAMS

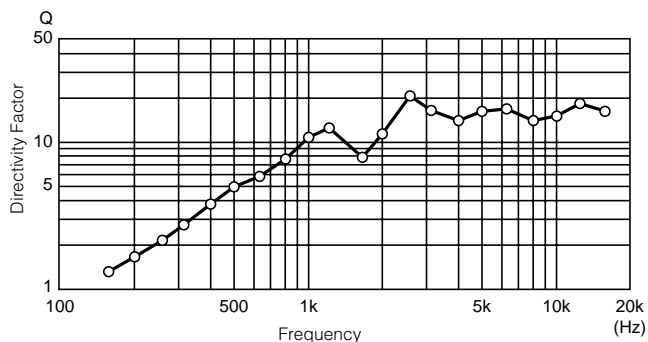
Beamwidth vs. Frequency



Frequency Response (1 W/1 m: 1/3 Octave Pink Noise)

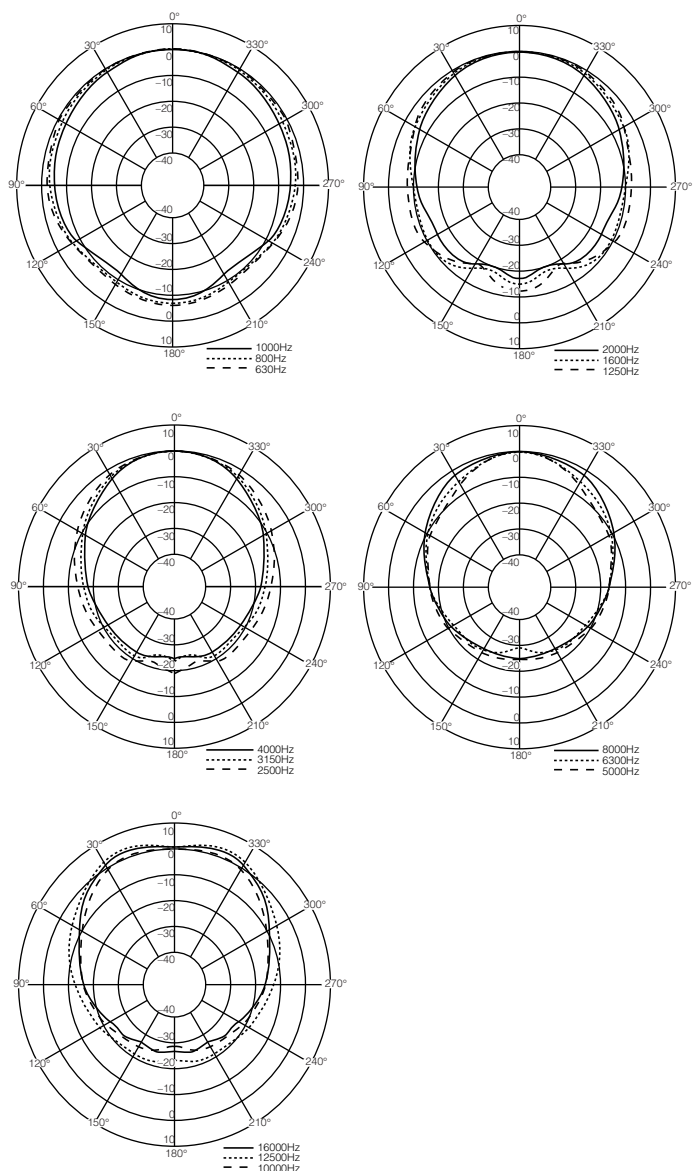


Directivity Factor vs. Frequency

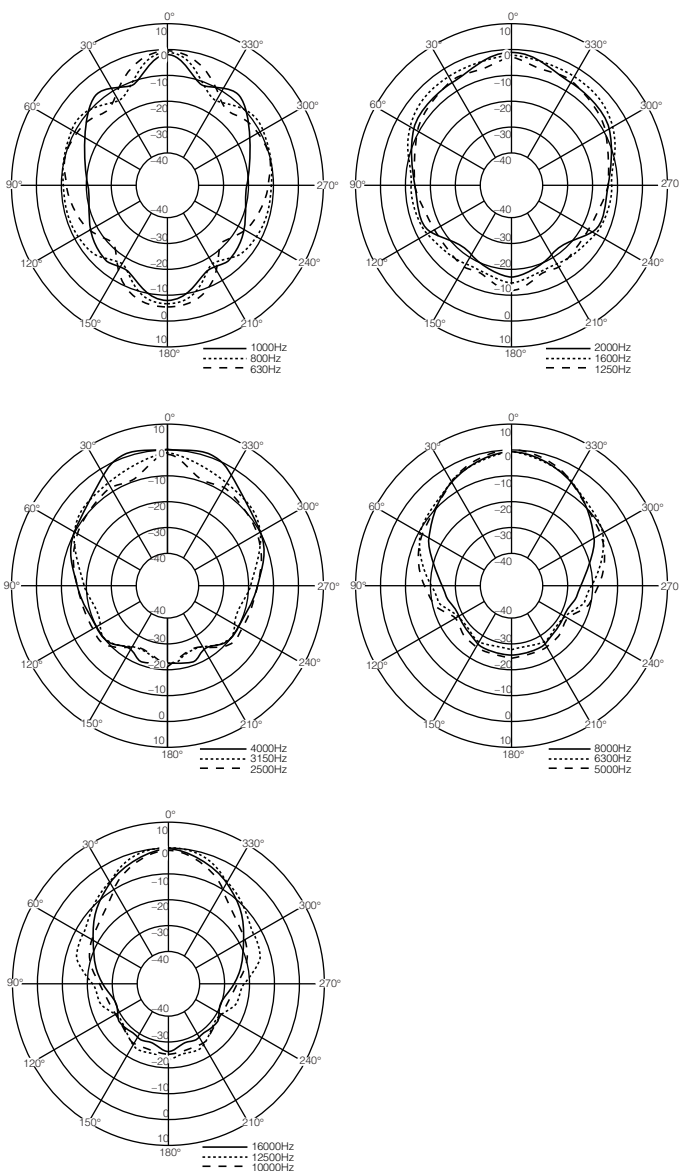


Polar Response

Horizontal

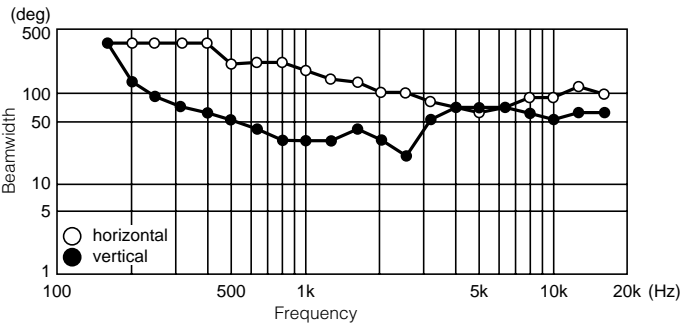


Vertical

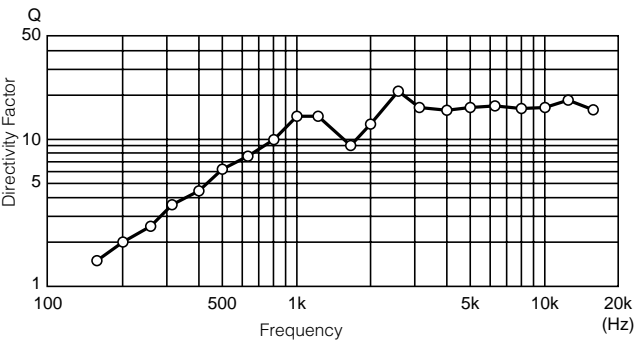


ES-0426/ES-0426WP CHARACTERISTIC DIAGRAMS

Beamwidth vs. Frequency

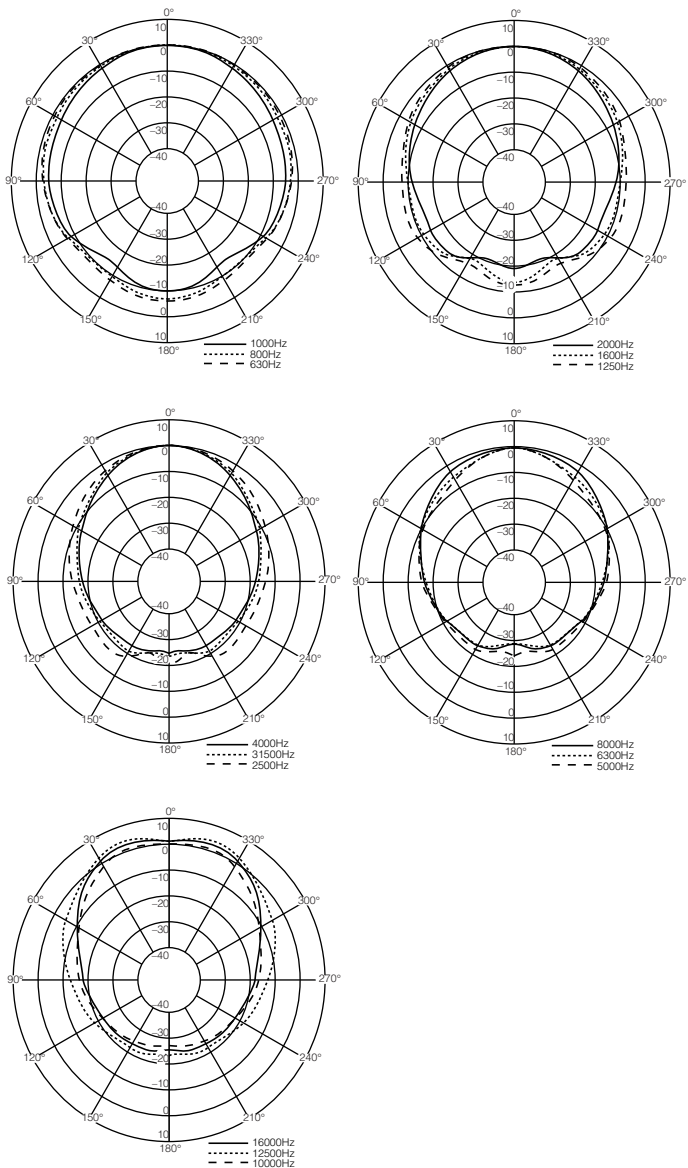


Directivity Factor vs. Frequency

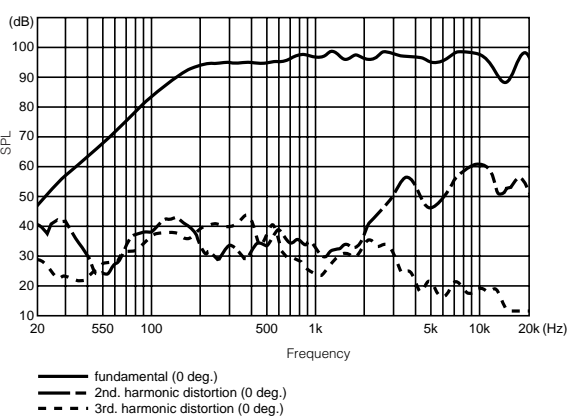


Polar Response

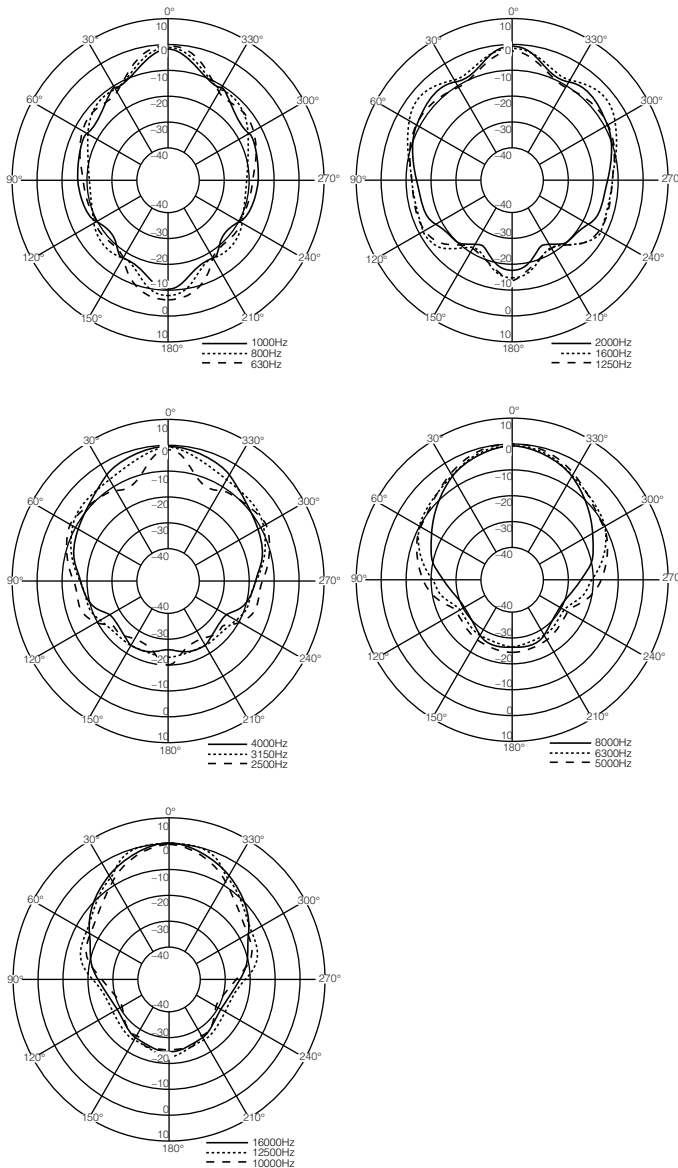
Horizontal



Frequency Response (1 W/1 m: 1/3 Octave Pink Noise)



Vertical

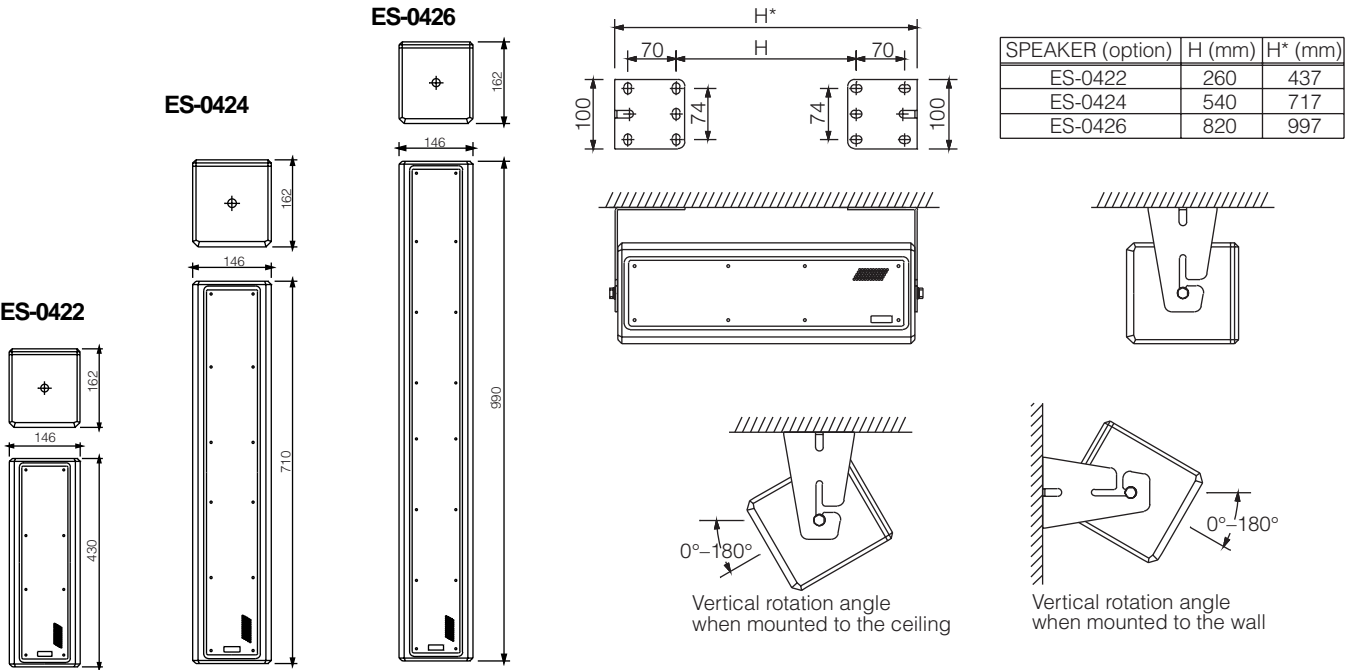


SPECIFICATION

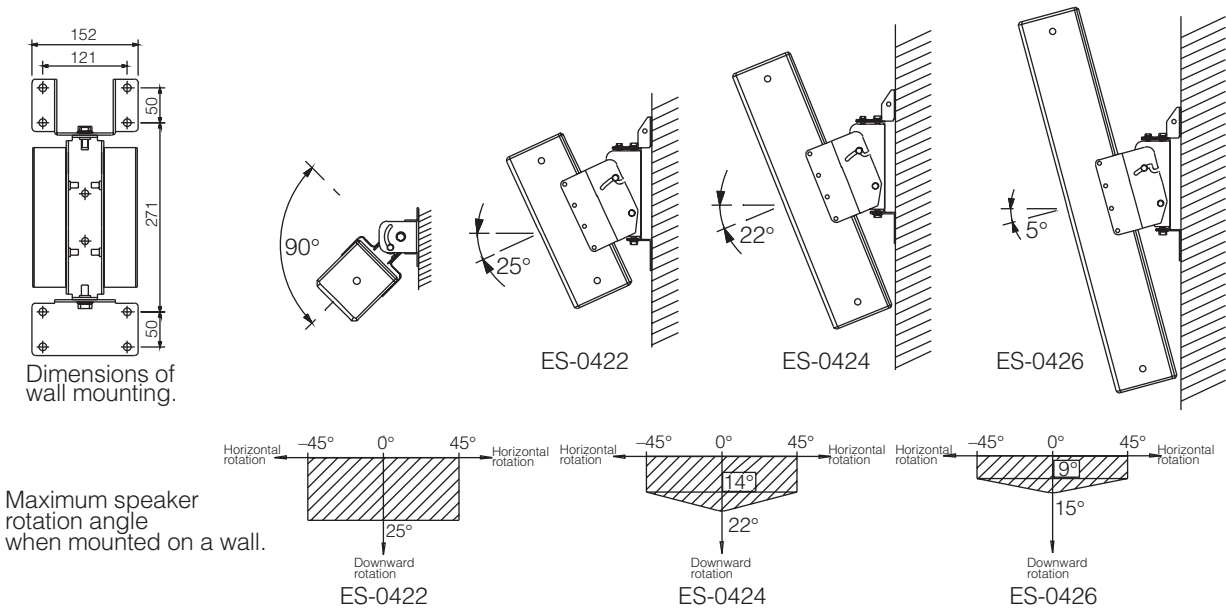
Model	ES-0422	ES-0424	ES-0426
Enclosure	Sealed enclosure		Sealed enclosure
Power handling capacity	Continuous pink noise: 80 W Continuous program: 240 W	Continuous pink noise: 120 W Continuous program: 360 W	Continuous pink noise: 120 W Continuous program: 360 W
Rated impedance	8 Ω	8 Ω	8 Ω
Sound pressure level	91 dB (1 W, 1 m)	95 dB (1 W, 1 m)	96 dB (1 W, 1 m)
Frequency response	120 – 20,000 Hz	120 – 20,000 Hz	120 – 20,000 Hz
Crossover frequency	3 kHz	3 kHz	3 kHz
Speaker component	Low frequency: 12 cm dia cone speaker x 2 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)	Low frequency: 12 cm dia cone speaker x 4 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)	Low frequency: 12 cm dia cone speaker x 6 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)
Input terminal	M5 screw terminal, pitch between barriers: 14 mm	M5 screw terminal, pitch between barriers: 14 mm	M5 screw terminal, pitch between barriers: 14 mm
Finish	Enclosure: Wood urethane paint, white Front grille: Steel plate acrylic paint, white	Enclosure: Wood urethane paint, white Front grille: Steel plate acrylic paint, white	Enclosure: Wood urethane paint, white Front grille: Steel plate acrylic paint, white
Dimensions (W x H x D)	146 x 430 x 162 mm	146 x 710 x 162 mm	146 x 990 x 162 mm
Weight	8 Kg	12 Kg	15 Kg
Option	Mounting bracket: HY-0421WL (for walls), HY-0421CL (for walls or ceilings) Matching transformer: MT-S0601		

APPEARANCE AND DIMENSIONAL DIAGRAMS

HY-0421CL Installation Example

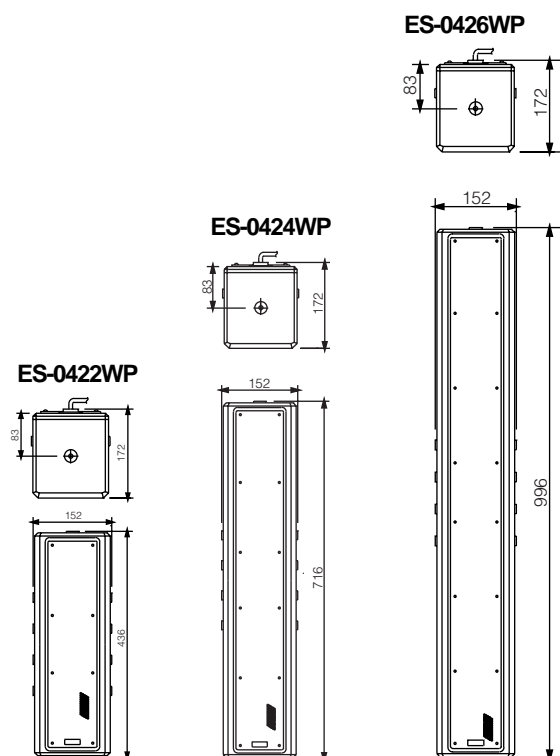


HY-0421WL Installation Example

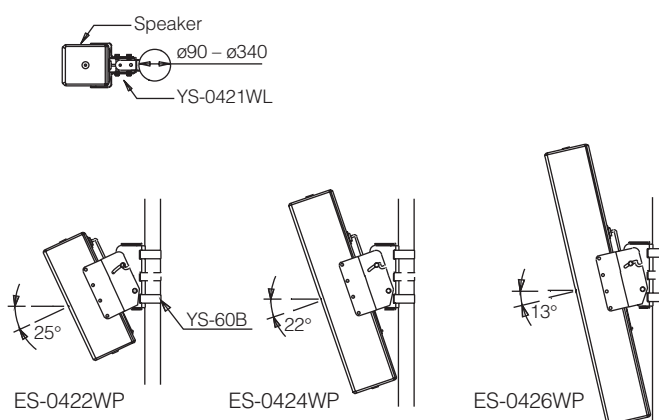


Model	ES-0422WP	ES-0424WP	ES-0426WP
Enclosure	Sealed enclosure	Sealed enclosure	Sealed enclosure
Power handling capacity	Continuous pink noise: 80 W Continuous program: 240 W	Continuous pink noise: 120 W Continuous program: 360 W	Continuous pink noise: 120 W Continuous program: 360 W
Rated impedance	8 Ω	8 Ω	8 Ω
Sound pressure level	91 dB (1 W, 1 m)	95 dB (1 W, 1 m)	96 dB (1 W, 1 m)
Frequency response	120 – 20,000 Hz	120 – 20,000 Hz	120 – 20,000 Hz
Crossover frequency	3 kHz	3 kHz	3 kHz
Speaker component	Low frequency: 12 cm dia cone speaker x 2 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)	Low frequency: 12 cm dia cone speaker x 4 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)	Low frequency: 12 cm dia cone speaker x 6 High frequency: CD horn fitted with compression driver (100° horizontal x 50° vertical)
Connected cable	Direct cable withdrawal from internal speaker: 7.4 mm in diameter Conductor cross section: 1.25 mm ² , 2-core cable, 2 m	Direct cable withdrawal from internal speaker: 7.4 mm in diameter Conductor cross section: 1.25 mm ² , 2-core cable, 2 m	Direct cable withdrawal from internal speaker: 7.4 mm in diameter Conductor cross section: 1.25 mm ² , 2-core cable, 2 m
Water resistance	IP-X4	IP-X4	IP-X4
Finish	Enclosure: Wood FRP coating paint, white Front grille: Stainless steel paint, white	Enclosure: Wood FRP coating paint, white Front grille: Stainless steel paint, white	Enclosure: Wood FRP coating paint, white Front grille: Stainless steel paint, white
Dimensions (W x H x D)	152 x 436 x 172 mm	152 x 716 x 172 mm	152 x 996 x 172 mm
Weight	8.5 Kg	12.8 Kg	16 Kg
Option	Mounting bracket: YS-0421WL (for walls or poles) Matching transformer: MT-S0601		

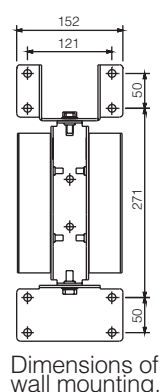
APPEARANCE AND DIMENSIONAL DIAGRAMS



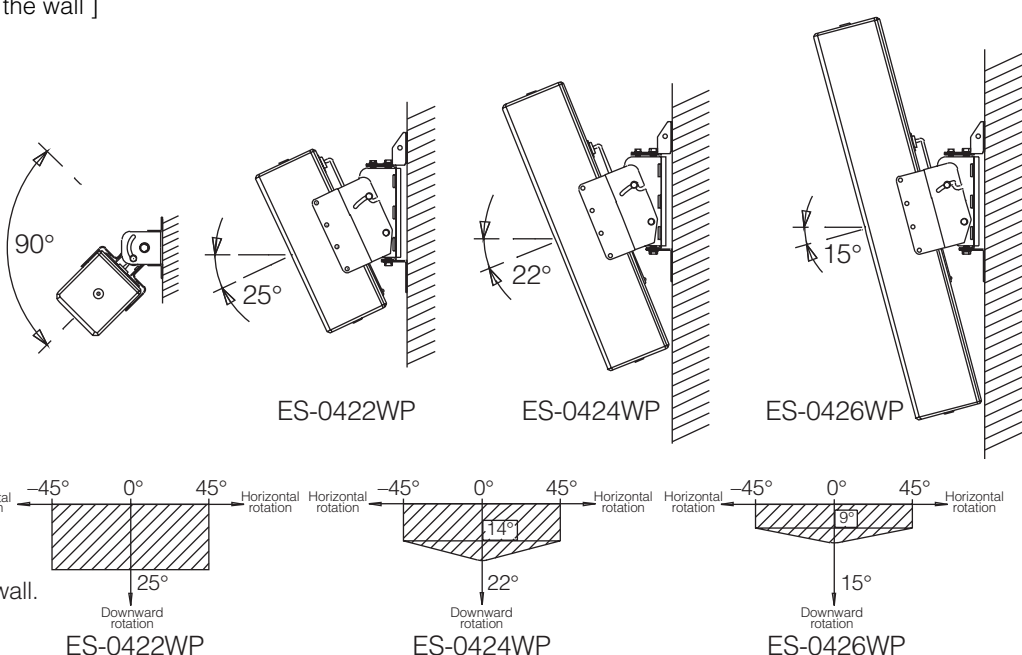
YS-0421WL Installation Example [Speakers mounted on the pole]



YS-0421WL Installation Example [Speakers mounted on the wall]



Dimensions of wall mounting.



Maximum speaker rotation angle when mounted on a wall.