COLUMN SPEAKER







CU-7000 Series
CU-9000 Series



COLUMN SPEAKER



interM



COLUMN
SPEAKER

CU-7000 SERIES

CU-7060/7120





CU-9000 SERIES

CU-9030/9060/9120



Column speaker is for public address and can be used for the purposes of announcement for delivering mainly messages and notifications of emergency broadcasting for safe evacuation in the event of disaster, and BGM broadcasting for creating natural atmosphere and image. You can select 100V/70V, 100/50 output for Inter-M column speaker and it can respond to various use environment by providing indoor speaker and outdoor speaker applied waterproof and dustproof design. Inter-M continuously provides multiple speaker line-ups with high reliability, high durability, and high quality.

CU-7000 SERIES



The CU-7000 series is an indoor column speaker specialized for places where rich sound pressure and high quality music reproduction are required. Designed to minimize driver-to-driver interference, it delivers clear and rich sound with high-frequency and low-loss professional-quality audio. It is suitable for indoor space such as **churches, religious facilities, hotel lobby, restaurant, etc.**

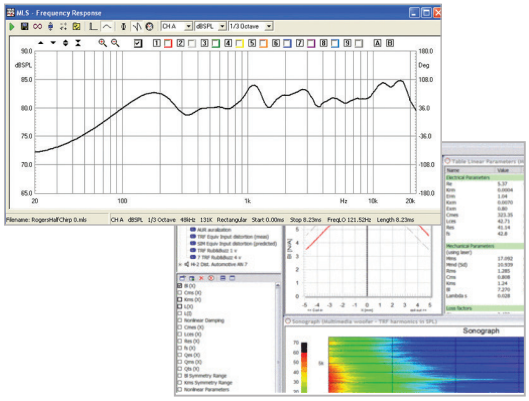
CU-9000 SERIES



The CU-9000 series is a high-performance column speaker specialized in demanding environments. It is equipped with a high-performance speaker driver that enables clear voice transmission from a distance, and is designed to be durable with a waterproof and dust-proof design (IP65), an aluminium body and a galvanized steel grille. Therefore, it can be applied to **special facilities such as brine, port facilities that need to cope with corrosion, and factories that require dust prevention.**

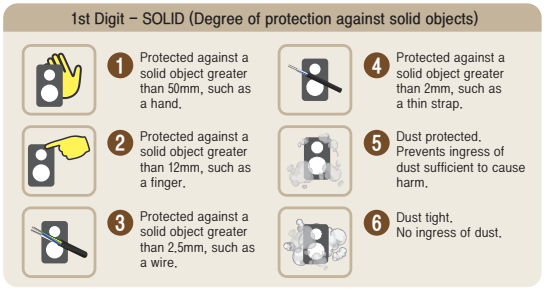
Quality Control - Provision of Reliability

Inter-M ships only reliable products with strict quality control through various tests such as 100-hour full power operation in a row, temperature (-10°C~40°C) and humidity(90~95%) to all of PA speakers including column speaker.

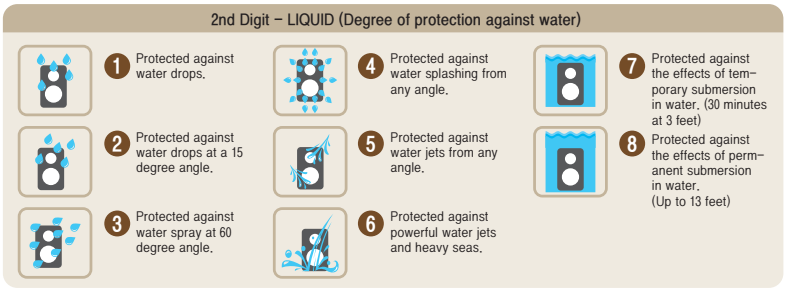


Outdoor Type Speaker with Waterproof & Moistureproof Features

Outdoor type column speaker of Inter-M is certified for waterproof & moistureproof so that it can provide optimal performance even in poor outdoor environment.
IP34 : CU-21/22/24F/FO, CU-41/42/44F/FO, IP65 : CU-9030/9060/9120
Even use at outside for long time, it prevents deformation and fault.







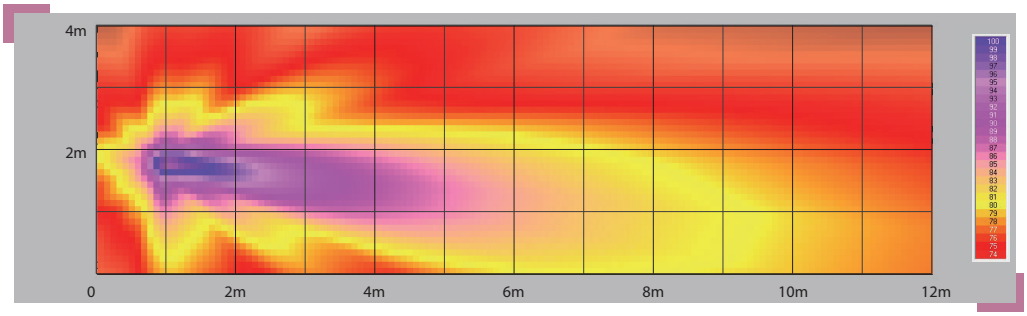
Selection of Long Distance Transfer and Output

Inter-M column speaker is designed to transmit the sound without any loss even in broaden area where having high-rise buildings and needing long distance transfer by applying high quality of matching transformer (high impedance, 100V line). In addition, it can correspond to various environments as it can select 100V/70V, 100/50 output.

Recommended usage of Column speakers

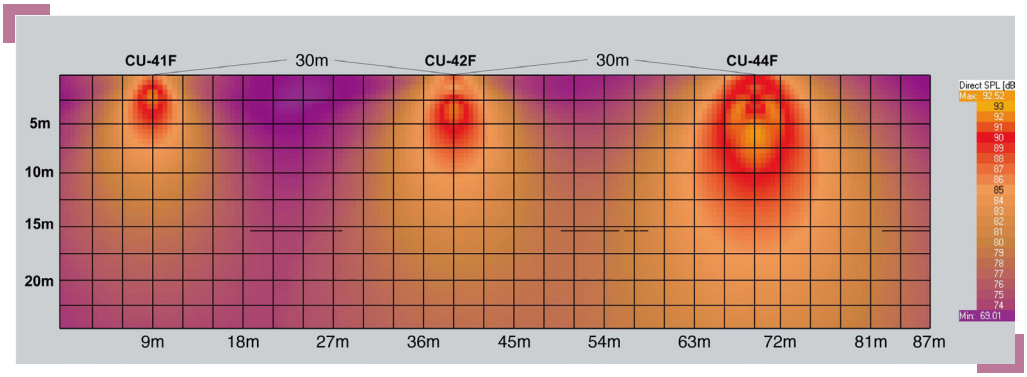
Column speakers are used in a wide variety of applications such as Emergency/Announcement broadcasting, BGM in various facilities, etc. The column speaker has a wide horizontal directional angle, and vertical directional angle can be narrowed and concentrated without spreading extra sound energy above and below. In outdoor use such as parks and outdoor parking lot, it can transmit a sound farther and cover a wide area. Also, in facilities with large reverberations such as airports, stations, and underground parking lots, the sound can be delivered directly to people where they are located, ensuring good intelligibility.

Intelligibility is an important factor when conveying information including BGM with a voice. If the intelligibility is poor, it can lose the ability to transmit information and cause simple noise. The articulation of the voice, which is a combination of vowels and consonants, is determined by the listening level of consonants. The vowels that occupy most of the voice energy are concentrated in the frequency band below about 1-2kHz. In addition, consonants that influence intelligibility are concentrated in the frequency band over 2kHz, and the frequency ranges from 7 to 8kHz depending on the pronunciation. Since human hearing is the most sensitive in the 2kHz to 4kHz band, it requires more than 3kHz to 4kHz playback in the mid-range to deliver the voice with good intelligibility.



* Scale: 1m interval

〈Figure 1. Simulation with CU-44F viewed vertically (2kHz)〉



* Scale
Hight : 3m interval
Width : 2.5m interval

〈Figure 2. CU-44F Horizontal simulation (2kHz)〉

Viewed in horizontal and vertical directions, CU-44F is a simulation of 2kHz EASE sound pressure distribution, a standard column speaker that can support from announcement to BGM playback.
At the frequency of 2-4 kHz, which influences intelligibility, the horizontal has a wide spreading characteristic of 130 °, and the vertical is made narrower by about 30 °.

When used indoors, the energy reflection and reverbaration on the ceiling is reduced, thus paging becomes more intelligible. Maintaining performance for announcement/emergency broadcasting, Inter-M's Column CU series is equipped with the CU-20 series of a more reasonable price, indoor CU-7000 series specialized for music playback, and the high-performance CU-9000 series specialized in demanding outdoor environments to be used for multipurpose for Guide/Emergency broadcasting and BGM, in addition to the CU-40 series, which is a column standard that realizes a wide frequency band.

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* Required sound pressure level according to noise

The following table is showing the noise level and the sound pressure level of each space.
It is clear when the broadcasting is delivered at a sound pressure with 6dB higher than the noise level where the space using, and optimal playback is possible which is not masked by noise

<Sound pressure standard table>

Space	Average noise level (dB)	Broadcast sound pressure level	
		BGM (Music)	Announcement
Train platform, parking lot	80 ~ 90	93	96
Factory, workspace	75 ~ 85	88	91
General store, waiting room	70 ~ 80	83	86
Hotel, office, etc	60 ~ 70	73	76

When installing a speaker, EASE simulation can visually express the speaker's cover range, sound pressure level, and articulation, including architectural sound. It is simulation software commonly used in the professional market because it allows an accurate simulation at the design level.

Series	Item	Model	Input Power	Max SPL	Weight	Dimension (mm)	IP
7000 Series	Indoor	CU-7060	60W/30W	111dB	5.4kg	130 x 420 x 195	-
		CU-7120	120W/60W	116dB	8kg	130 x 620 x 195	-
9000 Series	Special	CU-9030	30W/15W	106dB	3.1kg	130 x 320 x 125	IP65
		CU-9060	60W/30W	110dB	4.7kg	130 x 450 x 125	IP65
		CU-9120	120W/60W	112dB	7.1kg	130 x 650 x 125	IP65

Speaker Guide by Use Place

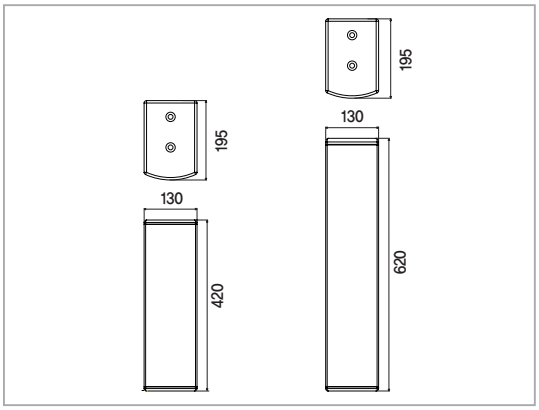
☆ : BEST, ○ : GOOD

Item		For Indoor Use	Special Use
Series		CU 7000	CU 9000
Education Facilities	School		○
	University	○	○
	Training Institute	○	○
Cultural Facilities	Religious Facility	☆	
	Theme Park	○	☆
Commercial Facilities	Shopping Center	○	
	Restaurant	☆	
	Cafe	☆	
	Department Store	☆	
	Government Office	○	☆
	Factory		☆
	Airport	○	☆
	Station		☆
	Hospital	○	☆
Sports Facilities	Stadium		☆
	Park		☆
Other Facilities	High-Rise Residential Building	○	
	Military Facility		☆
	Port Facility		☆
	Parking Lot		☆

1. Decide the use place first and then select if it is for indoor or outdoor.
2. CU-7000 series are exclusive indoor product for BGM and CU-9000 series are exclusive outdoor product corresponding to EN54.

CU-7060/7120





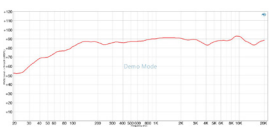
- Use unit having excellent sound quality/articulation/durability
- Indoor type, 100V/70V line of high impedance steel model
- Available to reproduce not only announcement but also high quality music
- Providing 2 models to choose 60W / 120W power depending on the application
- Applying high performance matching transformer to maximize the characteristics of dedicated speaker driver
- Screw Terminal for easy installation and connection (attached)
- Provide dedicated wall bracket which can be adjustable up to 11 degrees downward and left and right angles to 70 degrees.
- Built-in high-end tweeter which can reproduce clean and clear sound at high frequencies
- Wood enclosure

SPECIFICATION

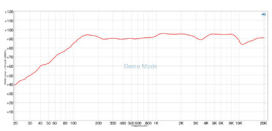
Model		CU-7060	CU-7120
Type		Dual 4" 2Way Column Speaker	Quad 4" 2Way Column Speaker
Driver	LF Driver	4"x 2	4"x 4
	HF Driver	1"x 1	1"x 2
Power Handling (IEC)		60W	120W
Input Power	100V	60/30W	120/60W
Nominal Impedance	100V	166/330Ω	83/166Ω
	LOW	8Ω	8Ω
Power Selection		By Terminal	By Terminal
Frequency Range (-20%)		55Hz ~ 20kHz	70Hz ~ 20kHz
Sensitivity (1W/1m)		92dB	94dB
Maximum SPL		110dB	115dB
Nominal Dispersion (Conical)	1kHz	140° / 100°	150° / 50°
	4kHz	180° / 100°	70° / 20°
Input Connection		4P Screw Terminal	4P Screw Terminal
Enclosure Material		15T MDF Polyurea Coating	15T MDF Polyurea Coating
Enclosure Color		Black/White	Black/White
Grille Material		EGI 0.8T	EGI 0.8T
Grille Color		Black/White	Black/White
Weight (Net)		5.4kg	8kg
Dimensions (Net, WxHxD, mm)		130 x 420 x 195	130 x 620 x 195
Included Accessories		Wall Bracket	Wall Bracket

FREQUENCY RANGE

• CU-7060



• CU-7120

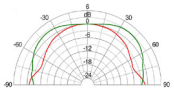


POLAR PATTERN (1kHz/4kHz)

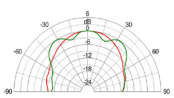
1kHz
4kHz

• CU-7060

Horizontal

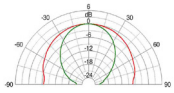


Vertical

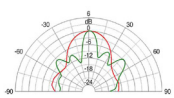


• CU-7120

Horizontal



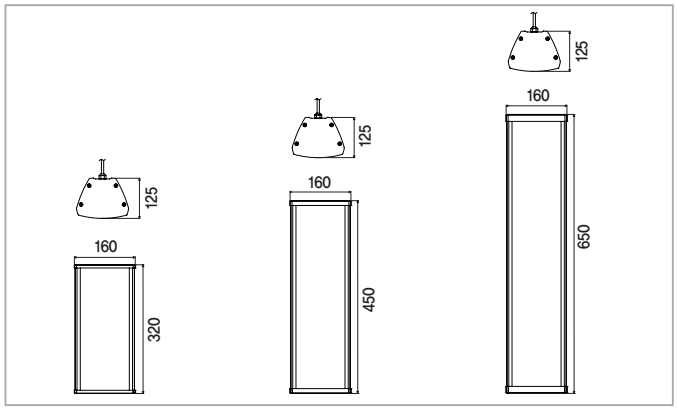
Vertical



Column Speaker

CU-9030/9060/9120





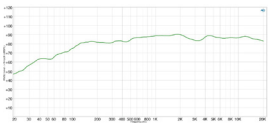
- Use unit having excellent sound quality/articulation/durability
- Use solid aluminum body and flame retarding steel grill
- Integrated aluminum galvanized steel
- Suitable for emergency broadcasting, announcement broadcasting as well as BGM playback because of excellent voice transmission performance at a long distance
- Easy-to-install design in sophisticated colors
- Excellent waterproof, moistureproof, and dustproof (IP65)
- Prevents corrosion and discoloration deformation even when used for long time
- Providing 3 models to choose 30W / 60W / 120W power depending on the application
- Applying high performance matching transformer to maximize the characteristics of dedicated speaker driver
- Easy input power selection via rotary switch
- Provide dedicated wall bracket which can be adjustable up to 11 degrees downward and left and right angles to 70 degrees.
- Built-in high-end tweeter which can reproduce clean and clear sound at high frequencies

SPECIFICATION

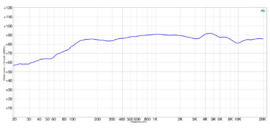
Model		CU-9030	CU-9060	CU-9120
Type		Single 4" 2Way Column Speaker	Dual 4" 2Way Column Speaker	Quad 4" 2Way Column Speaker
Driver	LF Driver	4" x 1	4" x 2	4" x 4
	HF Driver	1" x 1	1" x 1	1" x 1
Power Handling (IEC)		30W	60W	120W
Input Power	100V	30/15W	60/30W	120/60W
Nominal Impedance	100V	330/660Ω	166/330Ω	83Ω/166Ω
Power Selection		Rotary Switch		
Frequency Range (-20%)		88Hz ~ 20kHz	86Hz ~ 20kHz	87Hz ~ 20kHz
Sensitivity (1W/1m)		89dB	92dB	93dB
Maximum SPL		104dB	110dB	114dB
Nominal Dispersion (Conical)	1kHz	150˚ x 160˚	170° x 110°	160° x 50°
	4kHz	110˚ x 140˚	90° x 40°	100° x 50°
Input Connection		Bi-Wired INPUT Line Direct Connection	Bi-Wired INPUT Line Direct Connection	Bi-Wired INPUT Line Direct Connection
Enclosure Material		Top/Bottom/Body : AL	Top/Bottom/Body : AL	Top/Bottom/Body : AL
Enclosure Color		Metal Brown(Light Brown)	Metal Brown(Light Brown)	Metal Brown(Light Brown)
Grille Material		EGI 0.8T / Zn-plating	EGI 0.8T / Zn-plating	EGI 0.8T / Zn-plating
Grille Color		Metal Brown(Light Brown)	Metal Brown(Light Brown)	Metal Brown(Light Brown)
Weight (Net)		3.1kg	4.7kg	6.6kg
Dimensions (Net, WxHxD, mm)		160 x 320 x 125	160 x 450 x 125	160 x 650 x 125
Weather Resistant		IP65	IP65	IP65
Flame Resistant		O	O	O
Certification		KS	KS	KS
Included Accessories		Wall Bracket	Wall Bracket	Wall Bracket

FREQUENCY RANGE

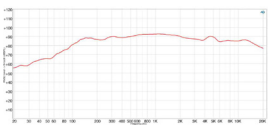
• CU-9030



• CU-9060



• CU-9120

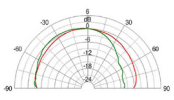


POLAR PATTERN (1kHz/4kHz)

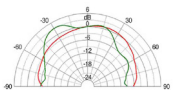
1kHz
4kHz

• CU-9030

Horizontal

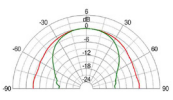


Vertical

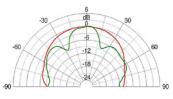


• CU-9060

Horizontal

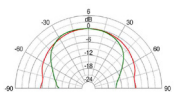


Vertical

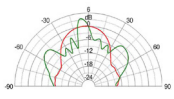


• CU-9120

Horizontal

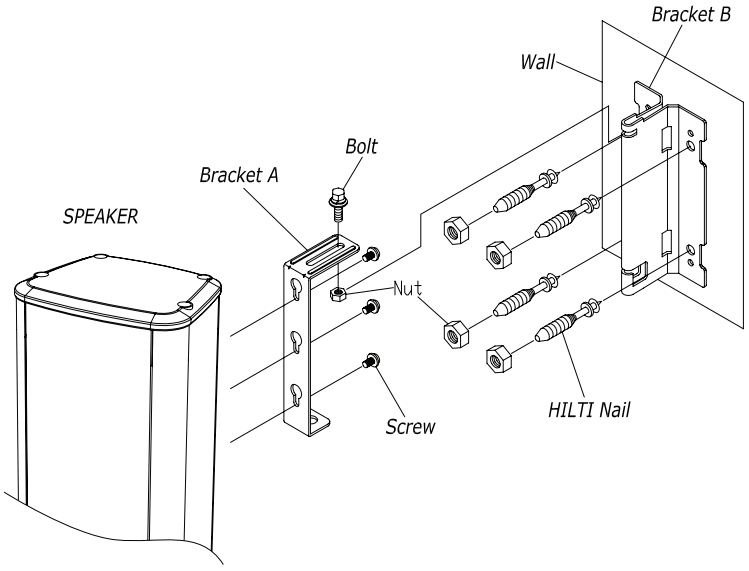


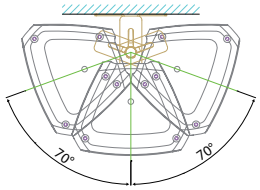
Vertical



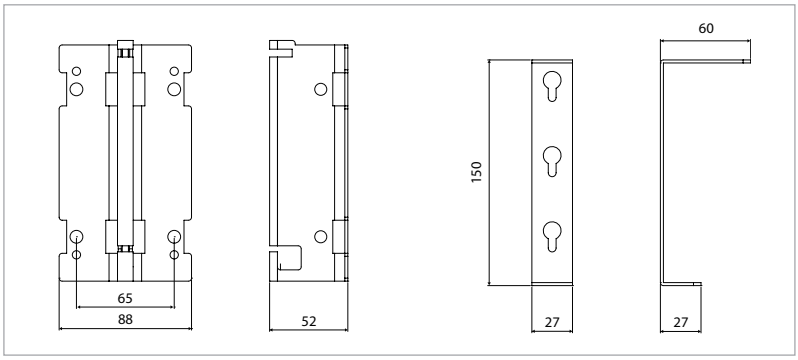
Accessories and Brackets

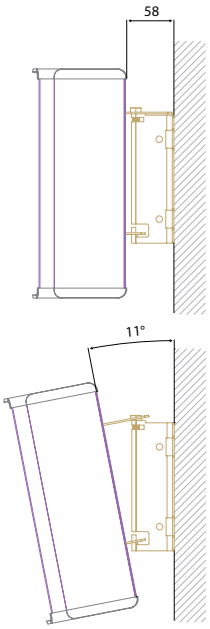
Wall Bracket





Horizontal maximum 70°
The horizontal angle varies depending on the vertical downward angle of the wall.

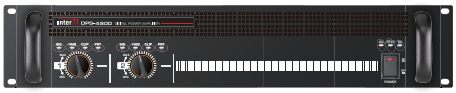




Vertical maximum 11°

Column Speaker

Recommended Amplifiers for Column Speakers



DPS Series Digital Power Amplifier

Single Digital Amplifier : DPS–240S/360S480S/720S
Dual Digital Amplifier : DPS–240D/360D/480D
Power : 70V, 100V Line, 8Ω
240/360/480/720W



DPA Series Digital Power Amplifier

Single Digital Amplifier : DPA–300S/600S/900S/1200S
Dual Digital Amplifier : DPA–300D/600D
Triple Digital Amplifier :DPA–300T
Quad Digital Amplifier : DPA–150Q/300Q
Eight Digital Amplifier :DPA–50E
Power : 70V, 100V Line, 8Ω
50/150/300/600/900/1200W



PA Series USB Mixing Amplifier

PA–206 : 60W
PA–212 : 120W
PA–224 : 240W
Power : 70V, 100V Line, 8Ω



PM Series USB Mixing Amplifier

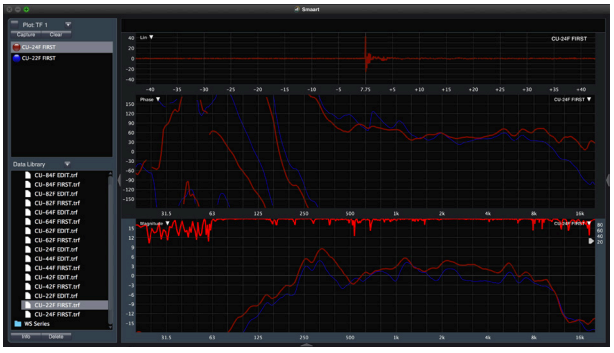
PM–236 : 360W
PM–248 : 480W
PM–260 : 600W
Power : 70V, 100V Line, 8Ω

Use cases of digital audio matrix system of NPX system

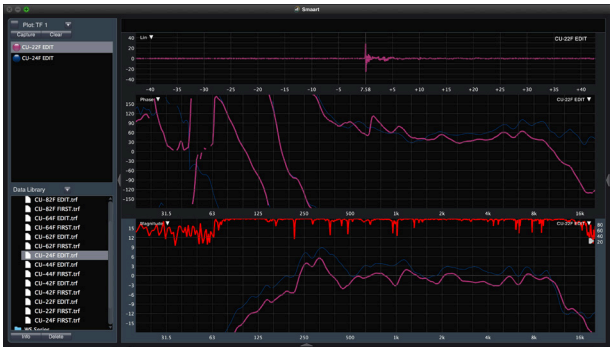
Inter-M's CU Series is all-round column speaker that can be used both indoor and outdoor such as educational, cultural, office, and gym facilities. Our new CU Series is composed of 4 series 14 models, and provides clear voice delivery and high quality BGM playback.

In addition, through a combination of CU Series column speaker and NPX system, users can adjust the sound parameter delicately with built-in DSP, which can improve CU Series column speaker's sound quality. For example, users can control the reflection sound from the ceiling or wall which allow the listener to have more clarity, and are able to set adequate sound at right time to avoid noise from crowd especially in shipping complex, train station, and airport, by scheduling function.

Ordinary frequency characteristics of CU-20 Series provide high clarity and sound quality, and the user can achieve even better sound by using NPX system's built-in DSP.



<CU-20 Series Column Speaker Original Frequency Features>



<Frequency features complementing the influence of the environment at the installation site>

Note

Note

Inter-M Corporation

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※ The contents stated in this company profile may be subject to change depending on our internal circumstances.

2024. 3. V5