

How to Select CMX Public Address Speakers?



Step-1: Where the Speaker will be installed, indoor or outdoor?

CMX Indoor speaker includes ceiling speaker, wall mount speaker, line array speaker, professional loudspeakers, pendant speaker etc; CMX outdoor includes horn speaker, outdoor wall mount speaker, projection speaker, outdoor column speaker.



Indoor Speaker
CSK-512HTM



Outdoor Speaker
HSK-30H

Step-2: The speaker will be used for Professional Audio (8 Ohm Technology) or Public Address (100V Transformer)?

Once the sound application is less than 50 meters and the number of loudspeakers is within 8, the first choice is professional audio 8 Ohm technology, the advantages of this system is hi-fi sound quality, easy system set up. Mainly use CS-2600 amplifier and PROS10 loudspeaker and mixer MX8U is the most popular solution. CMX 8 Ohm Speaker includes professional loudspeaker, column line array, line array speaker, 4"/5"/6"/8" cabinet speaker, 5"/6"/8" ceiling speaker.

Once the sound application is more than 50 meters and the number of loudspeakers is more than 10, the first choice is public address 100V technology, the advantages of this system is more than 10km distance audio transmission and more than 100K speakers centralized or decentralized management. CMX 100V speakers have a wide range from ceiling, wall mount to projection & pendant, from column type to horn and rock type, all of these speakers are built-in transformer to work with 100V PA Amplifiers only.

Note: Never mixed 100V amplifier with 8 Ohm speaker nor 8 Ohm amplifier to 100V speaker!



100V Speaker
WSK-530C (5" 30W)



8 Ohm Speaker
PROS10 (10" 250-500W)

How to Select CMX Public Address Speakers?



Step-3: How to Choose The Type of 100V Speakers?

Mounting Way: In-ceiling installation for ceiling speaker, Wall surface mount for wall mount/horn speaker/column speaker, pole mount for horn speaker/projection speaker, inside land mount for rock garden speaker, wireless speaker for wi-fi range WIFI62.

Sound Quality: Background music & paging system for ceiling speaker, wall mount speaker or projection/pendant column /garden /music horn speaker like CSK-613HT, CSK-512HTM, CSK-630K, WSK-530H is most popular; paging system for horn speaker and projection speaker like HSK-30T & PJSK-20PS is most popular

Cost-Effective Budget: ABS ceiling speaker CSK-66E , CSK-66H, wall mount speaker WSK-46M & WSK-530C, horn speaker HSK-30T, outdoor column speaker CLSK-20CA

High Performance Budget: Ceiling speaker CSK-613HT, CSK-512HTM, CSK-630K, wall mount speaker WSK-530H, WSK-430H, horn speaker, MHS-60, Pendant or wall mount speaker PSK-30K & PSK-30KA, outdoor column speaker CLSK-40CA

Voice Evacuation Speaker: This range of speaker usually made accordance with special European EN54 standards, FCS-56MEN, FCS-66FEN, HSK-30TEN, CLSK-20CAEN, PJSK-20P, EN, FWS-56MEN, WSK-530HEN are best sellers.

Special Application Speaker: Bathroom speaker, explosion-proof speaker, mini-size speaker, speaker with lamp etc please customize with CMX sales.

Connection Technology: Passive speaker need to connection with 100V amplifier, active or powered speaker built-in amplifier, can work stand alone like AWS40B, active wall mount speaker, active ceiling speaker/column speaker, SIP/IP POE speaker, wi-fi wireless speaker and Bluetooth wireless speaker.

Step-4: How to Determine Speaker Qty?

Purpose	Roof Height(m)	Separation Distance (m)	Coverage (SQ m)
BGM (6W Speaker) Average 90-120° Dispersion	>2.5	5	25
	2.5-4.5	6	36
	4.5-15	9	81
Paging (10W Speaker) Average 90-120° Dispersion	>2.5	6	25
	2.5-4.5	8	36
	4.5-15	12	81

How to Select CMX Public Address Amplifiers for Speakers



Step-1: How many audio sources for this sound system (CD/Mp3/FM/Microphones)?

Mainly compact PA system is about 3 sources, Mp3/FM/Bluetooth & 3 microphones, so best seller of CMX amplifier is EA-120 & 6 zone amplifier DA-240MT, both of the amplifier built-in USB, FM/Bluetooth and 3 microphones, it also can connection with additional audio sources players.

Step-2: How to determine the power of amplifier for CMX speakers?

For 100V technology sound system, after determine of speaker qty, summary of speaker connection power regardless of impedance, the amplifier rated power loading shall be 20% reservation higher than the speaker total power. For example, 16 pcs of 6W ceiling speaker CSK-66H=96W, which is ideally work with EA-120 120W mixer amplifier. The 20% amplifier loading reservation usually protect the amplifier from damage in case of user max the volume or speaker short circuit. 120W amplifier for 16 pcs 6W speakers, 240W amplifier DA-240MT for 32 pcs 6W speakers, DA-500MT 500W amplifier for 66 pcs 6W speakers. DA-4500 2000W amplifier for 266 pcs 6W speakers.

Step-3: How many speaker zones for this sound system?

Zone definition means speaker CMX group, sometime client want to make announcement only to some selected speakers, in this case, the zone is needed.

< 6 zone system: Ideally go for zone mixer amplifier, FA-120Z 3 zone mixer amplifier, DA-240MT 6 zone mixer amplifier, PA-6030MX 6 zone matrix amplifier, EVAC-500 6 zone voice alarm controller with amplifier, IP-708NA 8 zone IP decoder.

Medium Size 10-30 Zones: Ideally go for PA system with controller EVAC-500+EVAC-500RT 12-30 zone voice alarm system, PA-200MC, 10 zone pa system controller, PA-200MC+PA-200MZ 26-160 zones analog pa system, PA-1600 16-128 zone matrix pa system, IP-600 10-600 zones IP audio system.

Big Size 30 Zones: EVAC-500 up to 120 zones, IP-600 more than 600 zone IP audio system is popular.

How to Select CMX Public Address Controller for Speakers



Step-4, How to choose CMX system or controller for Speakers?

< 6 zone system: Ideally for zone mixer amplifier with paging microphone and Music source, DA-240MT 6 zone mixer amplifier, PA-6030MX 6 zone matrix amplifier.

6-20 Zones: Ideally go for analog pa system with paging microphone and music source, PA-200MC, 10 zone pa system controller, PA-200MC+PA-200MZ 26-160 zones analog pa system, PA-1600 16-128 zones matrix pa system.

>20 Zones: Ideally go for IP Audio, IP-600 complicate IP audio system or simpler IP-700 audio system (Cost higher compared to analog, cable layout is simpler and function more powerful).

Installation: IP audio is easier to be built-up over existing LAN network or super long distance system and easier future expansion; analog system is cheaper for small system but more complicated for cable layout and future expansion, wireless wi-fi system is mainly for small area commercial audio system, RDS wireless system is mainly for more than 5K outdoor commercial audio system.

Special Applications: EVAC-500 for voice alarm & evacuation system for emergency announcement system & full redundancy system; IP audio is also good for across cities or countries communication system, IP Audio system is good for PA & intercom talk back system, IP Audio system is also good for PA & BMS integration system.

Budget: Wireless sound system most cheap, but sound system is average, analog system is cheap but cable layout is expensive, while IP audio is reasonable price but cable layout is minimum.

Sound Quality: Professional audio is highest sound performance, for higher requirements of commercial audio system, we recommend IP audio decoder plus centralized professional sound system to ensure its sound quality and middle size system capacity