



WIDE-DISPERSION
FLUSH-MOUNT
CEILING SPEAKER

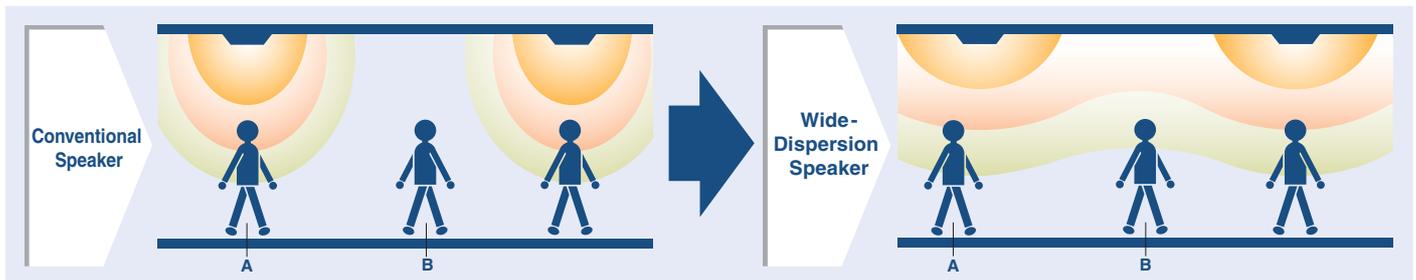
safe&sound



Delivering a new level of audio perfor

TOA introduces a new range of ceiling-mounted speakers that have been designed and engineered to overcome limiting factors that have been associated with conventional ceiling-mount speakers. Most noticeable has always been the high-frequency rolloff that resulted from limited speaker dispersion characteristics. TOA's new ceiling speaker range provides well-balanced audio reproduction without treble attenuation over an expanded listening area thanks to the extra-wide dispersion characteristics that are part of the overall speaker design. Perceived

speaker directionality and beaming tendencies are minimized, resulting in a natural, well-balanced sound over a wide area at all levels. Conventional speakers exhibit high frequency rolloff characteristics as the distance between speaker and listener increases. However TOA believes that an ideal ceiling-mounted speaker's response characteristics should include wide dispersion and non-frequency dependent directionality and this new ceiling speaker series proves that.

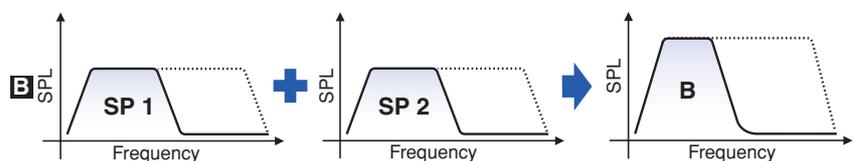
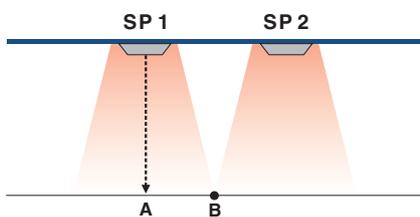


Detailed System Features

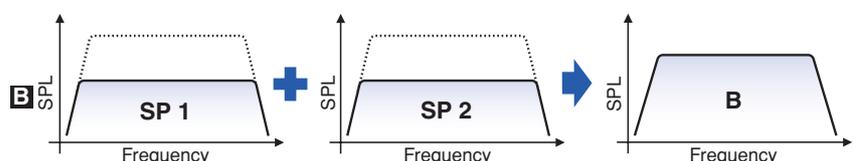
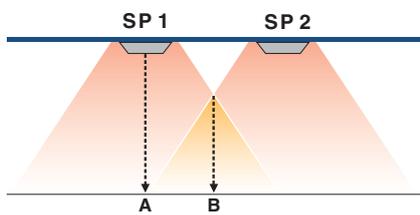
- Designed to blend into ceilings with a smooth, low-profile design.
- Extra ease of use and higher cost-effectiveness with the metal "back can" enclosure for the speaker rear. (F-122C, F-2352C, F-2852C, F-2322C models)
- Minimal high frequency rolloff allows clear and well-balanced sound reproduction over a wide listening area.
- Quick and easy installation to precisely mount speaker onto ceilings and walls. Rotating front grille also installs quickly and conveniently.
- The Electronic Controller (AC-120) option is required to provide increased control of the F-122C's speaker response.

Expanded listening area coverage thanks to the extra-wide dispersion characteristics of TOA's ceiling speakers makes it possible to utilize fewer speakers to cover a desired area, allowing more cost-effective installations.

Conventional Speaker



Wide-Dispersion Speaker



Performance in ceiling-mounted speakers.

Wide-Dispersion Ceiling Speaker Series

High Power (60W) 2-Way Wide Range



F-2852C (16cm cone)

Designed for higher power (60W) applications in locations having higher ceilings that are in the range of 3 to 6 meters.

- Equipped with back can meeting heat-resistant specifications.
- Equipped with a diffuser for wide dispersion of high frequencies.

Equalizing Controlled Type

30W Series Full Range



F-122C (12cm cone)

Optimized for use with the optional AC-120 Electronic Controller to deliver the highest quality audio in ceiling-mounted speakers as well as to tailor speaker response to suit specific installation requirements. (recommended 2 to 4m)

- Equipped with back can meeting heat-resistant specifications.
- Equipped with a diffuser for wide dispersion of high frequencies.

AC-120

30W Series 2-Way Wide Range



F-2352C (12cm cone)

Standard 2-way ceiling speaker for applications requiring a full range frequency response. (recommended 2 to 4m)

- Equipped with back can meeting heat-resistant specifications.
- Equipped with a diffuser for wide dispersion of high frequencies.

30W Series Full Range



F-2322C (12cm cone)

A cost-effective full-range speaker that is ideal for most ceiling sound requirements. (recommended 2 to 4m)

- Equipped with back can meeting heat-resistant specifications.
- Flat front panel mounts flush.

6W Series 2-Way Wide Range



F-2352SC (12cm cone)

Perfect for low power use, this speaker has increased cost-effectiveness. (recommended 2 to 4m)

- Because there is no back can, it can be mounted in ceilings even having minimal depth.
- Equipped with a diffuser for wide dispersion of high frequencies.

6W Series Full Range



F-1522SC (10cm cone)

Special compact model designed for low output applications. (recommended 2 to 4m)

- Because there is no back can, it can be mounted in ceilings even having minimal depth.
- Flat front panel mounts flush.

SPECIFICATIONS

| Model No. | F-2852C | F-2322C | F-2352C | F-122C | F-2352SC | F-1522SC |
|--------------------------------|---|--|---|---|--|---|
| Enclosure | Bass reflex type | | | | — | |
| Rated Input | 60W (high impedance) | 30W (high impedance) | | | 6W (high impedance) | |
| Power Handling Capacity | Continuous pink noise: 90W(8Ω), 60W (16Ω) Continuous program: 180W(8Ω), 120W(16Ω) | Continuous pink noise: 60W(8Ω), 30W (16Ω) Continuous program:120W(8Ω), 60W(16Ω) | | | Continuous pink noise: 9W(8Ω), 6W (16Ω) Continuous program: 18W (8Ω), 12W(16Ω) | |
| Impedance | | | | | | |
| 100V line: | 170Ω(60W), 330Ω(30W) 670Ω(15W), 3.3kΩ(3W) | 330Ω(30W), 1kΩ(10W), 3.3kΩ(3W), 10kΩ(1W) | | | 1.7kΩ(6W), 3.3kΩ(3W) 10kΩ(1W), 20kΩ(0.5W) | 1.7kΩ(6W), 3.3kΩ(3W) |
| 70V line: | 83Ω(60W), 170Ω(30W) 330Ω(15W), 670Ω(7.5W) 3.3kΩ(1.5W) | 170Ω(30W), 330Ω(15W), 1kΩ(5W), 3.3kΩ(1.5W), 10kΩ(0.5W) | | | 830Ω(6W), 1.7kΩ(3W) 3.3kΩ(1.5W), 10kΩ(0.5W) 20kΩ(0.25W) | 830Ω(6W), 1.7kΩ(3W) 3.3kΩ(1.5W) |
| 25V line: | 83Ω(7.5W), 170Ω(3.7W) 330Ω(1.9W), 670Ω(0.9W) 3.3kΩ(0.2W) | 170Ω(3.7W), 330Ω(1.9W), 1kΩ(0.6W), 3.3kΩ(0.2W), 10kΩ(0.06W) | | | 830Ω(0.75W), 1.7kΩ(0.4W) 3.3kΩ(0.2W), 10kΩ(0.06W) 20kΩ(0.03W) | 830Ω(0.75W) 1.7kΩ(0.4W) 3.3kΩ(0.2W) |
| Low (adjustable) | 16Ω, 8Ω | | | | | |
| Sound Pressure Level | 91dB(1W, 1m) | 90dB(1W, 1m) | 91dB(1W, 1m) | 90dB(1W, 1m) | 89dB(1W, 1m) | 88dB(1W, 1m) |
| Frequency Response | 60 – 20,000Hz (–10dB), 45 – 20,000Hz (–20dB) at installation in 1/2 free sound field (measured by installing the unit in the center of a ceiling.) | 70 – 20,000Hz (–10dB), 50 – 20,000Hz (–20dB) at installation in 1/2 free sound field (measured by installing the unit in the center of a ceiling.) | | | 80 – 20,000Hz (–10dB), 50 – 20,000Hz (–20dB) at installation in 1/2 free sound field (measured by installing the unit in the center of a ceiling.) | 65 – 18,000Hz (–10dB), 45 – 20,000Hz (–20dB) at installation in 1/2 free sound field (measured by installing the unit in the center of a ceiling.) |
| Speaker Component | | | | | | |
| High frequency: | Dome-type | 12cm cone-type | Balanced dome-type | 12cm cone-type | Balanced dome-type | 10cm cone-type |
| Low frequency : | 16cm cone-type | | 12cm cone-type | | 12cm cone-type | |
| Mounting Hole | ø250mm (maximum ceiling thickness: 37mm) | ø200 (maximum ceiling thickness: 37mm) | | | | ø135mm (maximum ceiling thickness: 37mm) |
| Input Terminal | Removable locking connector with screw-down terminals (2 input terminals and 2 bridge terminals) | | | | Push-in connector (Bridging terminal-2 branch type) | |
| Usable Cable | Solid copper wire: ø0.5 – ø1.6mm (equivalent to AWG No. 24 – 14) Stranded copper wire: 0.2 – 2.5mm ² (equivalent to AWG No. 24 – 14) | | | | 600V Vinyl-insulated cable (IV wire or HIV wire) Solid copper wire: ø0.8 – ø1.6mm (equivalent to AWG No.20 – 15) 7-core twisted copper wire: 0.75 – 1.25mm ² (equivalent to AWG No.18 – 17) | |
| Finish | | | | | | |
| Enclosure: | Steel plate, plating | | | | — | |
| Baffle: | Fire-resistant ABS resin (resin material grade; UL-94 V-0 or its equivalent), black | | | | | |
| Rim: | Fire-resistant ABS resin (resin material grade; UL-94 V-0 or its equivalent), white, paint | | | | | |
| Punched net: | Steel plate, white, paint | | | | | |
| Dust-proof bag: | — | | | | Artificial fiber, black | |
| Dimensions | ø280 x 227 (D)mm | ø230 x 200 (D)mm | ø230 x 229 (D)mm | ø230 x 229 (D)mm | ø230 x 154 (D)mm | ø155 x 117 (D)mm |
| Weight | 5.1kg (including mounting accessories) | 3.7kg (including mounting accessories) | 3.7kg (including mounting accessories) | 3.7kg (including mounting accessories) | 1.5kg (including panel) | 1kg (including panel) |
| Accessories | | | | | | |
| Panel: | 1 | | | | | |
| Ceiling reinforcement ring: | 1 | | | | — | |
| Safety wire: | 1 | | | | — | |
| Paper pattern: | 1 | | | | | |
| Option | | | | | | |
| Anchor hanging bracket: | HY-AH1 | | | | — | |
| Back can: | — | HY-BC1 | | | | — |
| Tile bar bridge: | HY-TB1 | | | | — | |
| Trim ring: | — | HY-TR1 | | | | — |
| Electronic controller: | — | | | | AC-120C | — |

Note: The F-122C must be used with an Electronic Controller AC-120.

Optional Accessories



HY-AH1
Anchor Hanging Bracket



HY-BC1
Back Can



HY-TB1
Tile Bar Bridge



HY-TR1
Trim Ring



AC-120
Electronic Controller



TOA Corporation
www.toa.jp

Specifications are subject to change without notice.
Printed in Japan (0303) 833-52-296-40 u