

## Install

## CVS 401

## 4" Coaxial In-Ceiling Loudspeaker for Installation Applications

- Coaxial full range ceiling loudspeaker for installation applications
- 30 Watts continuous, 120 Watts peak power
- 4" polypropylene driver with butyl rubber surround for enhanced durability and long-term reliability
- 0.75" ferrofluid cooled soft dome high frequency driver
- Wide constant directivity dispersion for optimum coverage
- EN54-24:2008 certified Type A
- UL 1480 certified for fire-protected signalling systems
- UL 2043 certified for air-handling spaces
- UV and weather resistant UL 94-V0 and 94-5VB ABS front with plated steel fire can enclosure
- Powder coated aluminium mesh grille with dust protection
- Multiple transformer taps for 70 V and 100 V line systems or 8 Ohm direct input
- Low insertion loss 25 W line transformer with easily accessible tapping switch
- Semi matt white finish fits unobtrusively in any environment
- Mounting C-ring and ceiling tile rails included
- Steel cover and strain relief clamping mechanism for fire rated cable
- 10-Year Warranty Program\*
- Designed and engineered in the U.K.

The CVS 401 is a coaxial ceiling loudspeaker engineered to provide superb audio performance in both background and foreground music sound systems. Ideally suited for a wide variety of applications, from restaurants and hotels to houses of worship and businesses of all types, the CVS 401 offers the power handling, wide frequency response and low distortion typically found in more expensive products. EN 54-24 certification for fire detection and fire alarm systems makes the CVS 401 the perfect choice where safety is a top priority. The loudspeaker is also UL 1480 certified for fire-protected signalling systems and UL 2043 certified for air-handling spaces.



### Exceptional Sound and Reliability

The design comprises a 100 mm (4.00") polypropylene full-range driver and 0.75" ferrofluid cooled soft dome high frequency driver mounted in a UV and weather resistant UL 94-V0 and 94-5VB ABS front with a plated steel fire can enclosure. Dust protection is provided in the form of an attractive powder coated aluminium mesh grille. The mineral loaded polypropylene cone material and butyl rubber surround enhance durability and long-term reliability. CVS 401 is specifically designed for applications requiring the combination of excellent music and speech sound quality and exceptional reliability.

## Install

# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

## Comprehensive Installation Package

Supplied with an integral zinc-plated steel back can with recessed termination box, the CVS 401 satisfies the vast majority of installation application requirements and features a semi matt white finish that fits unobtrusively into any environment. The removable locking connector has screw terminals for secure wire termination and "loop through" facility. A steel cover and strain relief clamping mechanism are provided for use with fire rated cabling. Security toggle clamps make for quick and easy installation, while two tile support rails and one C-ring are also included in the package. A plaster (mud) ring is available as an optional accessory. Rounding out these impressive features is custom-designed low insertion loss 25 W line transformer with easily accessible tapping switch, which ensures pristine performance and optimal versatility.



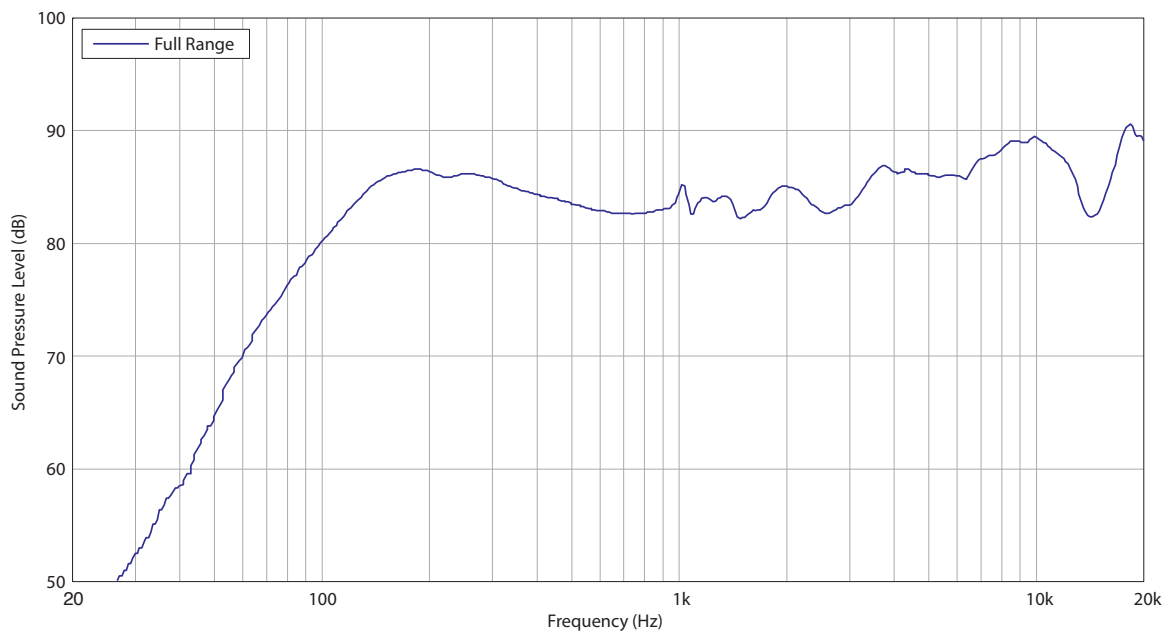
## You Are Covered

We always strive to provide the best possible Customer Experience. Our products are made in our own [Music Tribe](#) factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous [Warranty](#) program.

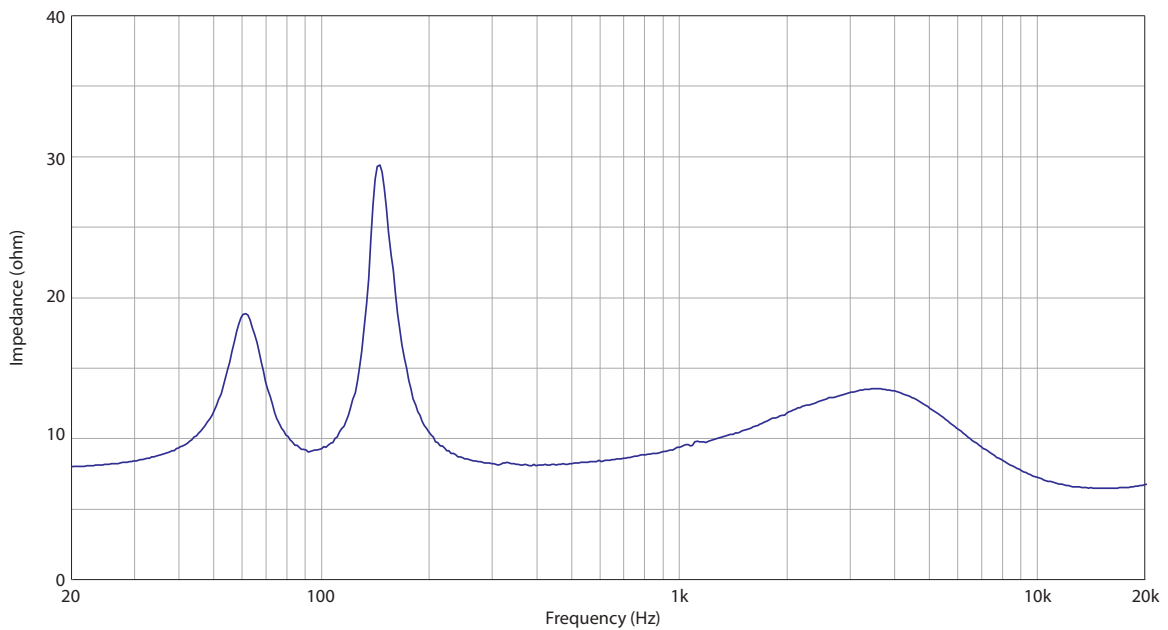
# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

## Frequency Response Sensitivity 1 W / 1 m



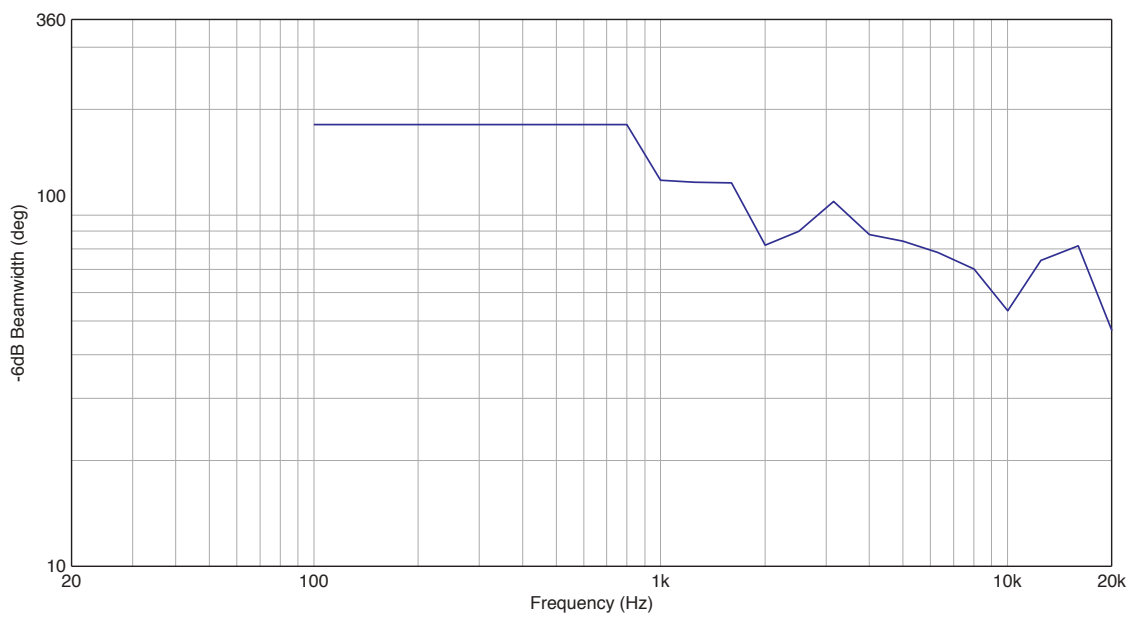
## Impedance



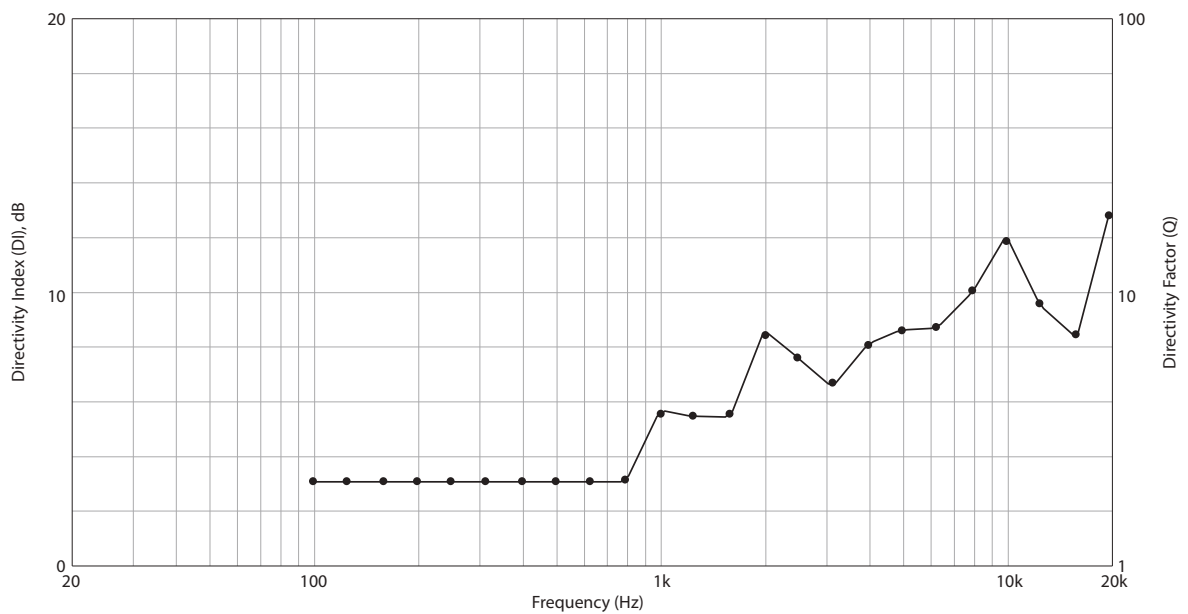
# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

## Beamwidth



## Directivity Index and Factor

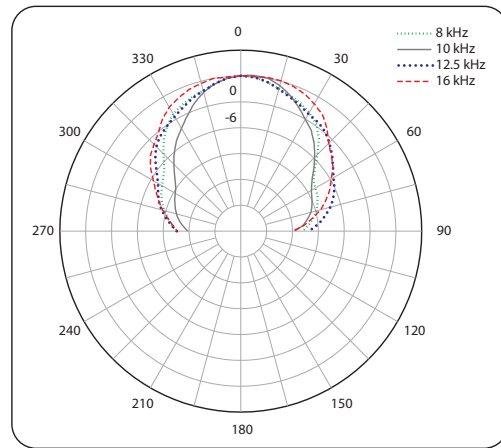
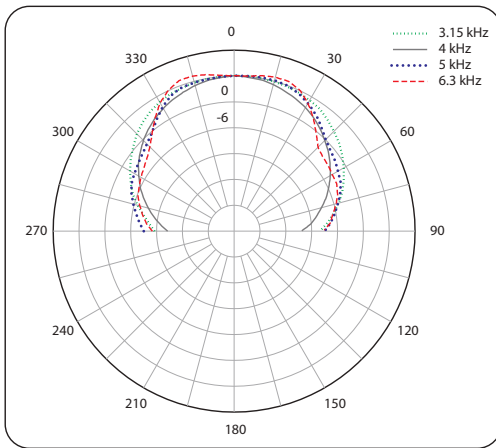
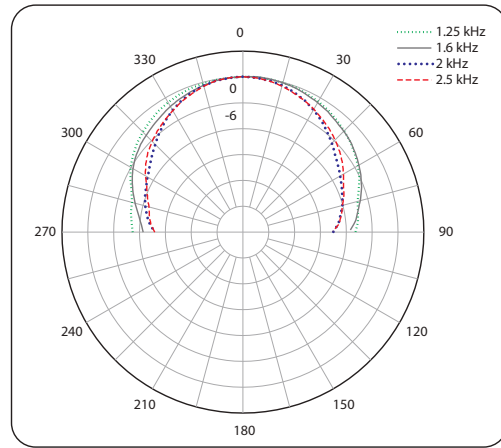
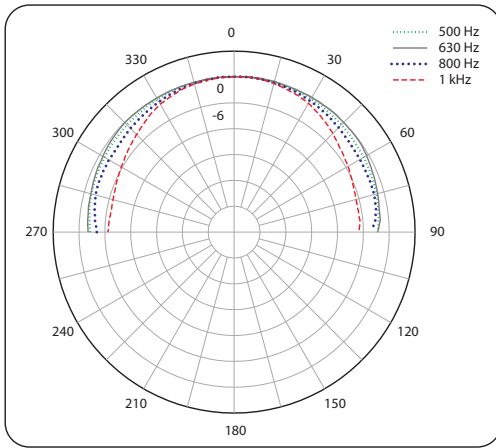
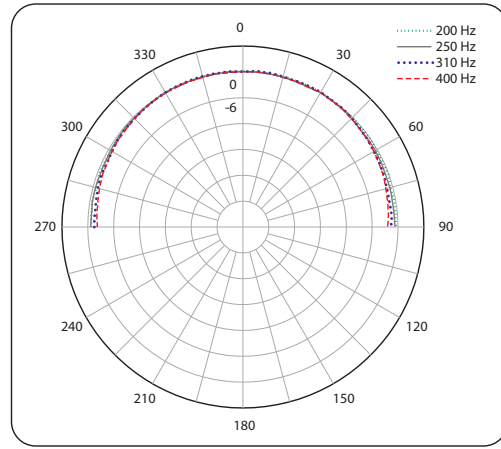
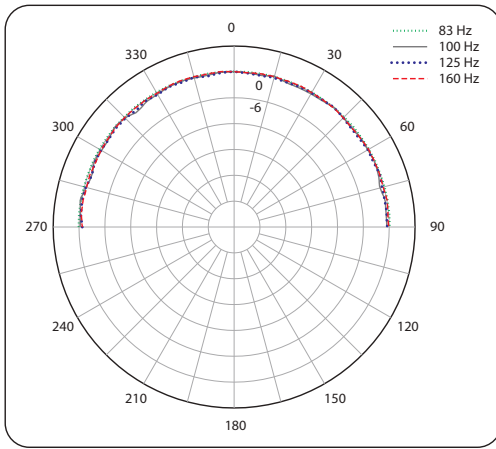


Install

# CVS 401

## 4" Coaxial In-Ceiling Loudspeaker for Installation Applications

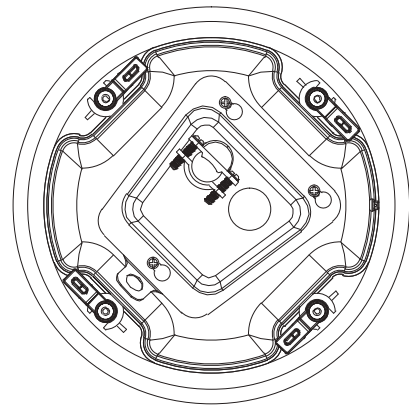
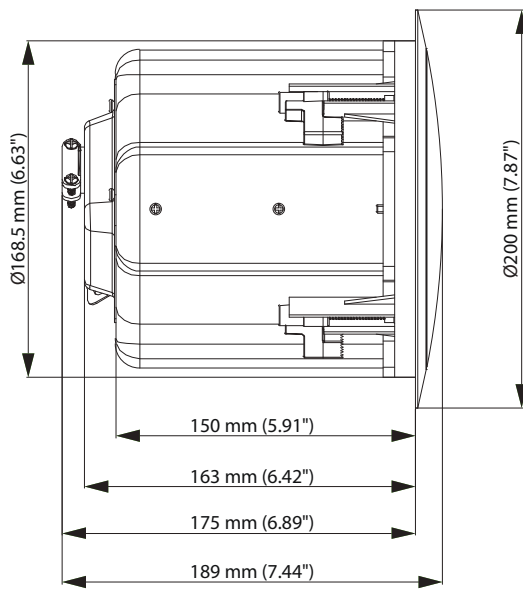
### Polar Plots



# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

## Dimensions



## Install

# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

## Technical Specifications

### Performance

Frequency response (+3dB, -3 dB)	102 Hz-20 kHz
Frequency response (-10 dB)	70 Hz-20 kHz
Sensitivity at 1m/1W	84 dB
Nominal Coverage Angle	120°
Directivity factor (Q) averaged 1 kHz to 6 kHz	5.4
Directivity index (DI) averaged 1 kHz to 6 kHz	7.3
<b>Power handling (LoZ)</b>	
*1 Average	30W
Programme	60 W
Peak	120 W
Recommended amplifier power	60 W @ 8 Ω
Nominal Impedance (Switch to LoZ)	8 Ω
Rated maximum SPL (1 m, Switch to LoZ)	102 dB
Average	99 dB
Peak SPL	105 dB
<b>Transformer taps</b>	
70 V	25 W/ 12.5 W/ 6.3 W/ 3.2 W
100 V	25 W/ 12.5 W/ 6.3 W
<b>Transducers</b>	
Low frequency	100 mm (4") PP cone
High frequency	20 mm (0.79") coaxially mounted

### Physical

Enclosure	Blind mount (BM)
Back can	Anodized steel
Baffle	Reflex loaded UL 94V-0 rated ABS
Grille	Aluminum, powder coated
Safety Features	Rear enclosure safety ring for load-bearing bond
Clamping Design	Security toggle clamp
Connectors	Euroblock-style connector with screw terminals (with input cover and cable gland supplied)

### Dimensions

Bezel diameter (grille max diameter)	200 mm (8")
Rear face of baffle to rear of back can	150 mm (5.91")
Rear face of baffle to top of safety loop	163 mm (6.42")
Rear face of baffle to rear of flex conduit	175 mm (6.89")
Hole cutout diameter	φ172 mm (6.77")
Net weight	2.77 kg (6.09 lbs) ±10%
Included accessories	Metal grille, cable gland, flex conduit, C-ring, tile-bridge kit, paint mask, cutout template
Optional accessories	Mud ring 48" Tile rail
Packed quantity	1 pair

#### Notes

\*1 Average power rating is under IEC-shaped pink noise with a 6dB crest factor for 100 hours continuously.

# CVS 401

4" Coaxial In-Ceiling Loudspeaker for  
Installation Applications

## Architecture & Engineering Specifications

The Ceiling Speaker System shall consist of a 100 mm (4.00") mineral loaded mid bass driver with coaxially mounted 20 mm (0.79") high frequency unit and passive frequency dividing network mounted in a vented, injection moulded, paintable front baffle in UL94V-0 ABS material.

The backcan shall be constructed of zinc plated steel. A termination box shall be integrated with the backcan, a removable locking connector with screw terminals for secure wire termination with "loop through" facility shall be provided. Strain relief will be provided by a clamping mechanism for use with plenum rated cable or conduit. A safety ring is located on the rear of the backcan for a load bearing safety bond.

Performance of the ceiling speaker shall meet or exceed the following criteria: The system shall have a conical coverage pattern of 120 degrees. Frequency response measured on axis shall be 70 Hz -20 kHz (-10 dB from rated sensitivity, measured in an IEC baffle in an anechoic chamber) with no equalization. Sensitivity shall be 84 dB (1 W @ 1 m). Long term power handling capacity as defined in EIA-426B test shall be 30 W, recommended amplifier power 60 W. The nominal system impedance shall be 8  $\Omega$  (in low impedance setting).

The ceiling speaker system shall be equipped with a 25 W high performance line transformer for use in 70.7 or 100 Volt distributed audio systems with 25, 12.5, 6.3, 3.2\* watt taps available. An easily accessible rotary switch located on the front baffle shall be available for selecting transformer and low impedance settings. A weather resistant perforated aluminium grille covers the transducer and switch.

Two support rails and one C-Ring shall be included with the ceiling speaker system. The front face diameter shall not exceed 200 mm (7.87"), overall depth from the front of the ceiling to the top of the cable clamp shall not exceed 175 mm (6.9"). The template cut out diameter shall be 172 mm (6.77").

The Ceiling Speaker System shall be the.....CVS401.



# CVS 401

4" Coaxial In-Ceiling Loudspeaker for  
Installation Applications



# CVS 401

4" Coaxial In-Ceiling Loudspeaker for  
Installation Applications



**Install**

# CVS 401

4" Coaxial In-Ceiling Loudspeaker for Installation Applications

MUSIC Tribe Manufacturing PH Ltd.  
17A Brunswick Street Hamilton HM 10 Bermuda

SUSPENDING THIS SYSTEM SHOULD ONLY BE DONE BY QUALIFIED PERSONS FOLLOWING SAFE INSTALLATION STANDARDS

UL Type:G 5ME2 LISTED

DoP No. XXX-XXXXXXX-XX  
EN54-24: 2008 TYPE A  
CoC No. XXXX-XXX-XXXX

MADE IN CHINA

LOUDSPEAKER FOR VOICE ALARM SYSTEMS FOR FIRE DETECTION AND FIRE ALARM SYSTEMS FOR BUILDINGS ONLY APPLICABLE TO EN54

CE XX 1438

**SPEAKER: CVS 401**

WIRING	PASSIVE
1+ / 2-	INPUT
3+ / 4-	LINK
INPUT	POWER
70 V LINE	3.2, 6.3, 12.5, 25 W
100 V LINE	6.3, 12.5, 25 W
8 Ω	30 W AVERAGE

REFER TO INSTALLATION WIRING DIAGRAM IN QUICK START GUIDE

**TANNOY**

DESIGNED AND ENGINEERED IN THE U.K.

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