



## Product Description

The Tannoy CMS401 DCe is a full bandwidth ceiling monitor system suited to high-level music and speech reinforcement applications requiring exceptional sonic quality with uncompromised reliability.

The 401DCe features Tannoy's exclusive point source Dual Concentric™ driver which provides wide dispersion characteristics and therefore excellent coverage of the listening area. The mid-bass and tweeter sections are coincidentally aligned to a true point source; ensuring a wide and controlled dispersion for optimum coverage; this while avoiding the massive loss of energy, in the vertical plane at the crossover frequency, inherent in two-way discrete designs.

This point source, constant directivity drive unit comprises a 100mm (4.00") multi fibre paper pulp mid bass cone and a 19mm (0.75") ferrofluid cooled, titanium dome HF unit with neodymium magnet system. The WideBand™ high frequency unit in the Dual ensures that this drive unit delivers an exceptionally detailed and open sound stage for unrivalled intelligibility. Extending the bandwidth gives percussive sounds more reality and impact, with vocals and instruments clearly more separate and distinct. This design, with extended frequency response and very low distortion, is equipped with dynamic high frequency protection.

The driver and passive frequency-dividing network is mounted in an injection-moulded pod. This, like the ceiling mounting ring in which the pod can be swivelled, is manufactured from UV/weather resistant UL94V-0 ABS material.

The inclusion of a premium quality 30W Tannoy THP 30 multi-tap transformer, for distributed-line operation, provides high system sensitivity, wide bandwidth and dynamic range; achieved with very low insertion loss.

Specifically designed for fast, simple and cost effective installation in new and existing buildings, the CMS401 DCe can be entirely angled towards the listener within the fixed ceiling-mounting ring. The challenge of difficult speaker placement, in less than perfect room configurations, is therefore eliminated by being able to discreetly pivot the loudspeaker towards the desired area of coverage.

## Features

- 100mm (4.00") point source Dual Concentric™ driver
- High power & high sensitivity with extended frequency response and very low distortion
- Wide, controlled constant directivity dispersion for optimum coverage
- Does not suffer from massive loss of energy in the vertical plane at crossover caused by two way discrete designs
- UV/weather resistant UL94V-0 ABS construction for structural integrity
- Dynamic high frequency protection
- Low insertion loss 30 Watt line transformer - for a more powerful and dynamic performance
- Tapping switch for settings
- 3 clamp self-aligning mounting system
- Ferrofluid cooled neodymium HF
- Packaged with tile rails and C-ring for quick & easy installation and simple stocking logistics
- Five year warranty

## Applications

- Foreground music & paging systems
- Multi-room stereo systems
- Home theatre
- Business music systems
- Boardrooms and offices
- Retail environments
- Public address systems
- Reception / waiting rooms
- Airports, convention centres and hotels

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## TECHNICAL SPECIFICATIONS

<b>System</b>	CMS401 DCe	
Frequency Response (-3dB)	(1)	100Hz - 50kHz
Frequency Range (-10dB)	(1)	80Hz - 54kHz
System Sensitivity (1W @1m)	(2)	88dB (1W = 2.83V for 8 Ohms)
Nominal Coverage Angle	90 degrees conical	
Coverage Angle (1kHz to 6kHz)	120 degrees conical	
Directivity Factor (Q)	5.1 averaged 1kHz to 6kHz	
Directivity Index (DI)	6.2 averaged 1kHz to 6kHz	
Rated Maximum SPL	106dB (average) 112dB (peak)	
<b>Power Handling</b> (3)		
Average	60W	
Programme	120W	
Peak	240W	
Recommended Amplifier Power	120W @ 8 Ohms	
Nominal Impedance	8 Ohms	
<b>Transformer Taps</b> (via front rotary switch)	30W / 15W / 7.5W / 3.75W / OFF & low impedance operation	
70V		
100V	30W / 15W / 7.5W / OFF & low impedance operation	
<b>Distortion</b>		
10% Full Power	2nd Harmonic	3rd Harmonic
250Hz	2.91%	0.1%
1kHz	0.18%	0.9%
10kHz	0.79%	0.14%
1% Full Power	2nd Harmonic	3rd Harmonic
250Hz	0.5%	0.07%
1kHz	0.25%	0.32%
10kHz	0.45%	0.07%
Crossover	2kHz - 2nd order LF, 2nd Order HF (with Dynamic HF protection)	

### Notes

- (1) Average over stated Bandwidth. Measured in an IEC baffle in an Anechoic Chamber  
 (2) Unweighted Pink noise input, measured at 1m on axis  
 (3) Long term power handling capacity as defined in EIA - 426B test

<b>Transducers</b>	
Low Frequency	100mm (4.00") Dual Concentric™ constant directivity driver with multi fibre paper pulp cone
High Frequency	19mm (0.75") titanium dome with neodymium magnet system
<b>Physical</b>	
Enclosure Baffle Grille	UL 94V-0 rated ABS Steel, with weather resistant coating
Safety Features	Safety ring located at rear of enclosure for load bearing safety bond
Clamping Design	Security toggle clamp
Connectors	Removable locking connector with screw terminals with "loop through" facility
Safety Agency Ratings (pending)	UL-1480, UL-2043, CE
Dimensions	
Bezel diameter	205mm (8.07")
Front of ceiling to rear of pod	147.6mm (5.81")
Net Weight (ea) CMS401 DCe	TBA
Included Accessories	C Ring, tile bridge, paint mask, cutout template, grille
Optional Accessories	Plaster (mud) ring

### Architectural Specifications

The in-ceiling system shall consist of one 100mm (4.00") Dual Concentric™ full range point source, constant directivity transducer. The two-way system shall incorporate an optimised low loss crossover network. Performance of the CMS 401DCe shall meet or exceed the following criteria; Frequency response measured at 1 metre on axis with a swept sine wave shall be 80Hz - 54kHz (-10dB), sensitivity shall be at least 88dB for 1W @ 1 metre with minimal loss accounted for.

The driver impedance and maximum power handling (without transformer) shall be 8 Ohms and 120W respectively. The dispersion of the in-ceiling system shall be 120° conical (1kHz-6kHz).

In 70V or 100V distributed audio systems the CMS401 DCe shall use the integral THP30 high performance transformer with the optional 30, 15, 7.5 & 3.75W taps\* available via the tapping switch. Utilising a three way self-aligning clamping mechanism, the baffle shall be constructed from 19mm (0.75") moulded ABS and supplied with a perforated metal grille, both components shall be paintable.

The system shall not exceed the following dimension:  
 205mm diameter x 151mm deep (8.00" diameter x 5.90" deep)  
 Hole cutout size shall be 181mm (7.25")

The in-ceiling system shall be...the Tannoy CMS 401 DCe.