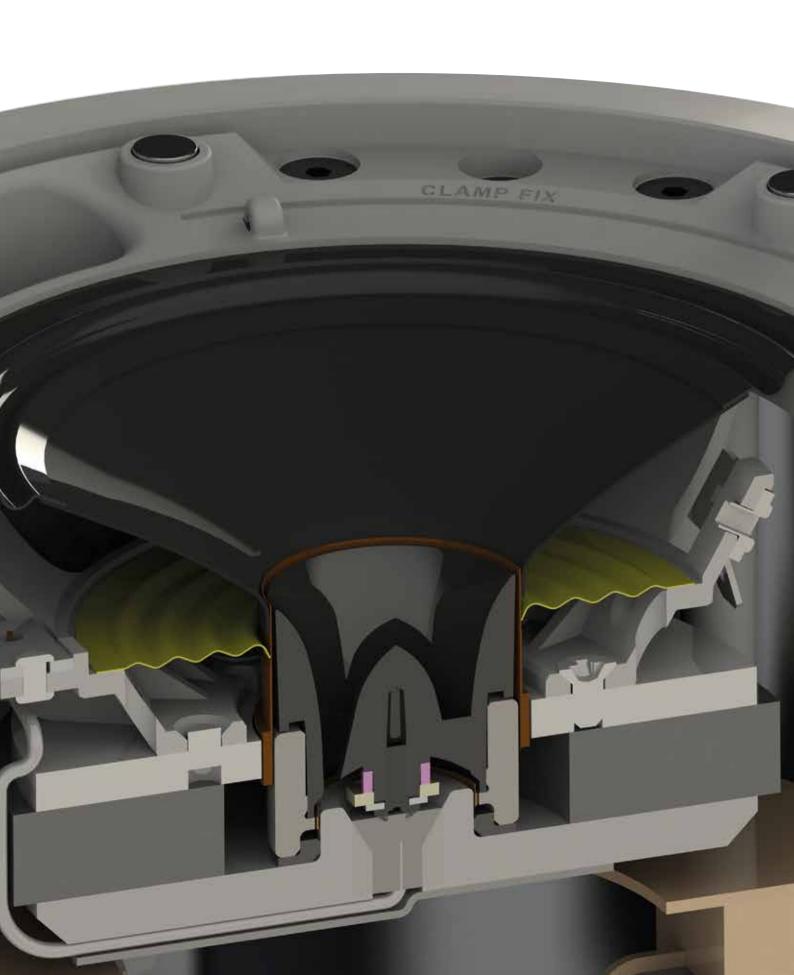
## **TANNOY**

CMS 3.0

# REVOLUTION REINVENTED.

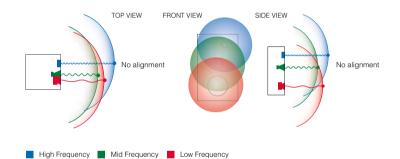


# Early Tannoy ceiling speakers

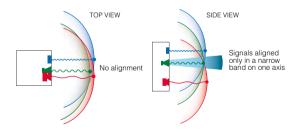


In the early 1990s we took our studio-grade Dual Concentric™ drivers and put them in the ceiling, giving birth to our legendary CMS (Ceiling Monitor System). Now we introduce the most significant design and acoustic development in over 20 years.

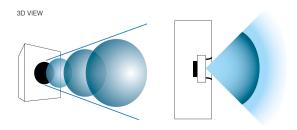
## **Dual Concentric benefits**



Discrete driver speaker systems cannot reproduce signals accurately because their sources are displaced in space.



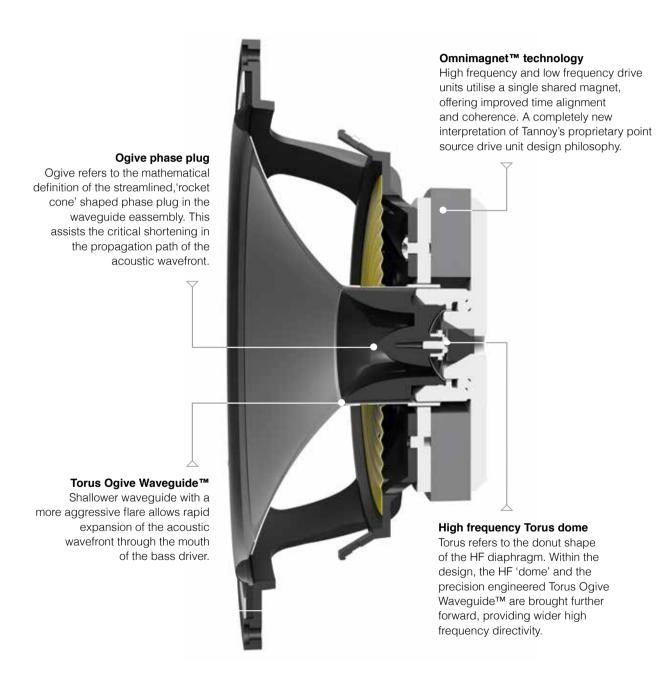
Even when delays are applied to compensate for driver alignment, signals can only be aligned along a narrow listening plane on one axis.



In a Dual Concentric<sup>™</sup> driver the signal sources are perfectly aligned, resulting in smooth response and a wide listening area in both horizontal and vertical axes. Signals remain perfectly aligned over a wide area in both vertical and horizontal axes.

## **New Dual Concentric driver**

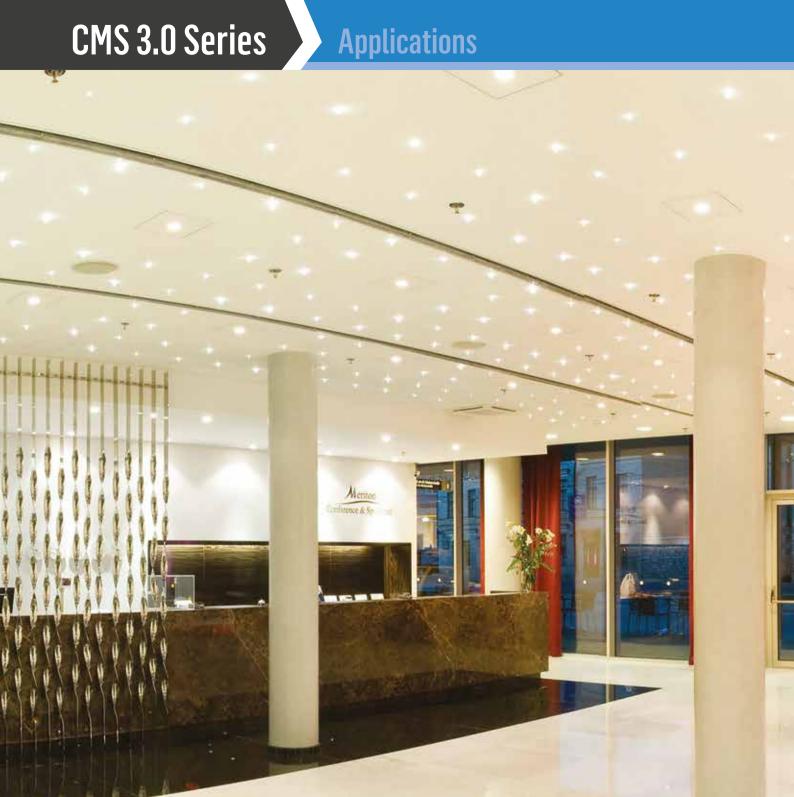
The Dual Concentric™ driver exhibits better harmonic alignment, the effect of which is to deliver a more natural sound with superb tonal balance and greater intelligibility. Propagating a spherical wave front aligned on all three axes, Tannoy's point source driver delivers even dispersion into a wide listening field in both the horizontal and vertical planes. Optimal transient performance and sound quality is achieved by the integrated design approach of the Dual. An even response throughout the listening area and a constant time delay over the frequency spectrum provides exceptional off-axis performance.



## **New features**

As well as a completely new Dual Concentric driver design, the new CMS 3.0 range also features a host of mechanical and aesthetic changes that make the process of specifying, installing and commissioning easier than ever before, from new back cans or clamp designs to more convenient termination panels and a choice of grille fixings, from the classic bevelled edge to the new Arco Grille accessory. All in all, these changes help make CMS 3.0 the most compelling choice on the market for premier grade ceiling loudspeaker requirements.





Whether it's in the pursuit of leisure and entertainment, learning, retail or the business world, investing in high quality audio components is crucial for the best results.



## Restaurant / Entertainment

Successful restaurants and other entertainment venues rely on many other factors rather than just the quality of the food. Better audio quality in any venue leads to more relaxed customers, where the right levels and clarity means they are more likely to spend longer in a bar or restaurant, typically spending more money as a result.

Of course, the public perception of good audio quality is important to a venue's reputation and image, and by extension, the ongoing success of the business. Getting it wrong could cost the business dearly.

### Retail

High quality (less distortion) and of course the right type of background music can be highly influential in consumer spend. Research has shown how shoppers tend to linger and browse in a store longer (particularly fashion retail) when the background music is of a higher quality and appropriate to the target audience.

Obviously, the more time a customer spends in a store means a higher likelihood that they will spend more money while they are there, so the direct relation between revenue and atmosphere is obvious. Good audio quality is an essential part of that equation.

## Corporate

The effective exchange of ideas is central to any corporate boardroom. Many modern businesses now think and operate on a global scale, so increasingly this exchange of ideas involves voice or video conferencing between international stakeholders, both internal and external.

In this kind of environment, high quality audio is more important than ever in ensuring productive business outcomes.

### **Education**

In any educational establishment, intelligibility is key to better learning outcomes. Poor audio quality can have a whole host of detrimental effects, such as general fatigue and reduced attention spans, and with many colleges and universities welcoming a lot of international students year on year, whose first language may not be the one being spoken during lessons, then it's even more important to ensure that good intelligibility is paramount.

As modern classrooms become more reliant on multimedia content, high quality audio is an essential part of achieving positive learning outcomes for all students.

## The full line up

## CMS 3.0 at a glance

With a fundamental redesign of the Dual Concentric driver, the new CMS 3.0 range is our most advanced ceiling device ever produced, providing better clarity and wider dispersion, as well as a range of mounting options to suit any application. The available range means that whatever the challenges you face in an installation, CMS 3.0 will help overcome the limitations of the space.



#### **Dual Concentric Loudspeaker**

The new Dual Concentric driver design features revolutionary Omnimagnet™ technology and unique patent-pending Torus Ogive Waveguide™ device, together providing more consistent and controlled directivity along with improved high frequency response. Improved time-alignment and greater coherence between LF and HF results in a wider sweet spot for enhanced performance both on and off-axis.



#### **ICT (Inductive Coupling Technology) Models**

The point source configuration of the Tannoy ICT driver's mid-bass and tweeter sections ensures a wide and controlled dispersion for optimum coverage, avoiding significant energy losses in the vertical plane at the crossover frequency, a flaw inherent in typical two-way designs. The ICT (Inductive Coupling Technology) drive unit also addresses two common component failures in background music systems: the tweeter and the crossover. Use of wireless electromagnetic coupling to drive the tweeter means that no crossover is required, making the ICT drive unit exceptionally reliable and ideal for applications where constant heavy usage is the norm.



#### **Eyeball variant**

Specifically designed for fast, simple and cost effective installation in new and existing buildings, the CMS 403DCe can be entirely angled towards the listener within the fixed ceiling-mounting ring. By discreetly pivoting the loudspeaker towards the desired area of coverage, the problems of difficult speaker placement - particularly in less than perfect room configurations – are easily overcome.



#### "Q" variants

The new "Q" variant, designed specifically for high-ceiling applications, incorporates a proprietary waveguide design with a tight, uniform 70-degree conical dispersion pattern.



#### **Low Profile**

With a greatly reduced back-can depth, the ultra low-profile CMS 503DC LP has been engineered specifically for applications where ceiling cavity dimensions are a critical limiting factor. This specialized ceiling device retains the exceptional sonic performance of the standard CMS 503DC, in a much shallower profile package, achieving similar back-can volume by virtue of slightly larger diameter (and hole cut-out size).



#### **BM (Blind Mount)**

Version is supplied with an integral back-can, ready to install as a single unit.



#### PI (Pre-Install)

These are is supplied without a back-can (separate back-can available).

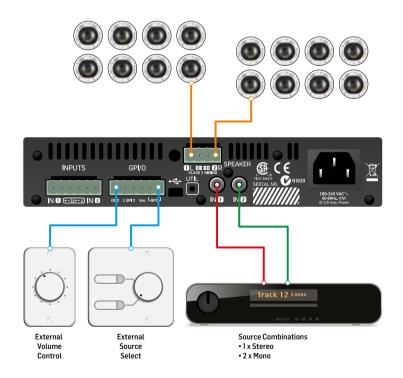
MODEL VARIANTS								
		CMS 403	CMS 503	CMS 603	CMS 803			
Dual Concentric	Blind Mount		DC BM	DC BM	DC BM			
	Pre Install		DC PI	DC PI	DC P1			
	Low Profile		DC LP					
	Qcentric wave guide				DCQ			
	Eyeball	DCE						
ICT Models	Blind Mount		ICT BM	ICT BM				
	Pre Install		ICT PI	ICT PI				
	Low Profile		ICT LP					
	Eyeball	ICTe						
	Life Safety			ICT LS				

SPECIFICATION OVERVIEW								
Model	Dispersion	Frequency Range (-10dB)	Sensitivity	Rated SPL (avg.)	Rated power (@ 16 ohms)	Dimensions (Dia x Depth)		
CMS 403DCe	90°	80 Hz - 54 kHz	88 dB	106 dB	120 W	205 x 147.6 mm		
CMS 403ICTe	90°	80 Hz - 24 kHz	88 dB	105 dB	100 W	205 x 147.6 mm		
CMS 503DC BM	90°	74 Hz - 54 kHz	89 dB	107 dB	120 W	205.9 x 188 mm		
CMS 503ICT BM	90°	74 Hz - 24 kHz	89 dB	106 dB	100 W	205.9 x 188.5 mm		
CMS 503DC PI	90 °	70 Hz - 54 kHz	89 dB	106 dB	120 W	205.9 x 133.3 mm		
CMS 503ICT PI	90 °	71 Hz - 24 kHz	89 dB	106 dB	100 W	205.9 x 131.7 mm		
CMS 503DC PI Backcan	90°	70 Hz - 54 kHz	89 dB	107 dB	120 W	205.9 x 153.5 mm		
CMS 503ICT PI Backcan	90°	71 Hz - 24 kHz	89 dB	106 dB	100 W	205.9 x 153.5 mm		
CMS 503ICT LP	90°	77 Hz - 24 kHz	89 dB	106 dB	100 W	274 x 98.6 mm		
CMS 503ICT LP	90°	77 Hz - 24 kHz	89 dB	107 dB	120 W	274 x 98.6 mm		
CMS 603DC BM	90°	50 Hz - 30 kHz	91 dB	110 dB	160 W	274 x 255.8 mm		
CMS 603DC PI	90°	46 Hz - 30 kHz	91 dB	110 dB	160 W	274 x 100.7 mm		
CMS 603ICT BM	90°	51 Hz - 24 kHz	91 dB	109 dB	160 W	274 x 258.1 mm		
CMS 603ICT PI	90°	46 Hz - 24 kHz	91 dB	107 dB	120 W	274 x 100 mm		
CMS 603DC PI Backcan	90°	46 Hz - 30 kHz	91 dB	110 dB	160 W	274 x 168.5 mm		
CMS 603ICT PI Backcan	90°	46 Hz - 24 kHz	91 dB	109 dB	120 W	274 x 168.5 mm		
CMS 603ICT LS	90°	51 Hz - 24 kHz	91 dB	109 dB	160 W	274 x 258.1 mm		
CMS 803DC BM	90°	40 Hz - 35 kHz	89 dB	112 dB	180 W	319 x 310.5 mm		
CMS 803DC PI	90°	41 Hz - 35 kHz	89 dB	112 dB	180 W	319 x 125.6 mm		
CMS 803DC PI Backcan	90°	41 Hz - 35 kHz	89 dB	112 dB	180 W	319 x 168.5 mm		
CMS 803DCQ	60 °	40 Hz - 35 kHz	93 dB	113 dB	180 W	319 x 310.5 mm		



CMS 3.0 utilizes a 16 ohm driver, making it ideal for use in high performance low-impedance systems (with optimized performance when used in conjunction with Lab.gruppen LUCIA amplifiers) powering 8 CMS 3.0 loudspeakers per channel.

# Ideal for use in high performance low-impedance systems

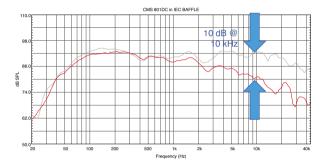


With LUCIA, Lab.gruppen brings enhanced audio performance and greater flexibility to a decentralized approach in AV systems design, putting power, processing, control and I/O exactly where it's needed. In a multitude of AV applications where high quality audio is required, LUCIA offers system designers a logical, costefficient and scalable alternative to complex and costly distributed systems with rack-mounted amplification, matrixing and processing. With LUCIA, Lab.gruppen brings enhanced audio performance and greater flexibility to a decentralized approach in AV systems design, putting power, processing, control and I/O exactly where it's needed. In a multitude of AV applications where high quality audio is required, LUCIA offers system designers a logical, costefficient and scalable alternative to complex and costly distributed systems with rack-mounted amplification, matrixing and processing.

## CMS 3.0 - A measurable difference

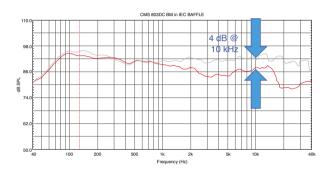
## Off Axis Performance – Enhanced Constant Directivity (8" example)

CMS 801 DC - On axis and 45 degrees off axis response.



CMS exhibits excellent constant directivity response – response remains constant off axis. 90 degree pattern holds to 5 kHz.

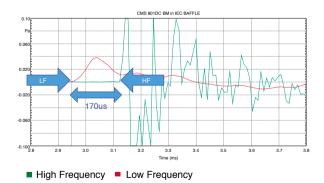
CMS 803 DC - On axis and 45 degrees off axis response.



Wider and better controlled dispersion of CMS 803DC; the 90 degree pattern is held constant to beyond 17 kHz.

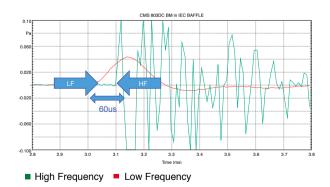
## Improved Driver Integration – Enhanced Constant Directivity (8" example)

**CMS 801DC** - (magnified) individual LF and HF impulse responses.



The graph shows that the time origin of the LF and HF waves are separated by approximately 170  $\mu$ S on the CMS 801 driver.

**CMS 803DC** - (magnified) individual LF and HF impulse responses.



The time origin of the LF and HF waves are separated by approximately  $60~\mu S$  on the CMS 803DC driver. The improvement moves us closer to a perfect acoustic-center alignment; subjectively producing a more neutral sound, and less "forward midrange".

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