TANNOY®

CMS

CEILING MONITOR SYSTEMS
INSTALLATION MANUAL

CMS 501 BM	CMS 601 BM
CMS 501 DC BM	CMS 601 DC BM
CMS 501 PI	CMS 601 PI
CMS 501 DC PI	CMS 601 DC PI

CMS 501 models TEMPLATE HOLE CUTOUT SIZE: 190mm

CMS 601 models TEMPLATE HOLE CUTOUT SIZE: 253mm

CONTENTS

1. INTRODUCTION

Thank you for purchasing this Tannoy Ceiling Monitor System product. This product range is suited for high-level music and speech reinforcement applications requiring exceptional sonic quality with uncompromised reliability.

2. UNPACKING

Every Tannoy product and accessory is carefully inspected before packing. After unpacking, please inspect your product to make sure no damage has occurred in transit. In the unlikely event of any damage, would you please notify your dealer immediately and retain your shipping carton, as your dealer may ask you to return the faulty unit to him for inspection.

Each CMS loudspeaker is packed in pairs and provided with the following accessories as standard; C Ring, tile-bridge kit, grille, cut-out template, and paint mask. A plaster (mud) ring is also available as an optional extra.

SAFETY NOTE:

In order to comply with relevant fire safety regulations (i.e. BS 5839:1998), it is required that in the event of fire, that failure of the circuit to which the loudspeaker is connected does not occur before evacuation of the building is complete. Suitable measures include: -

a) use of terminal blocks (for connection to primary) with a melting point of not less than 650°C, for example constructed from ceramic materials;

c) use of terminal blocks of a lower melting point but protected with thermal insulation;

d) use of terminal blocks such that, on melting, an open-circuit or a short-circuit does not occur.

3. PRODUCT FEATURE IDENTIFICATION:

Thank you for purchasing a Tannoy Ceiling Monitor System product. This product range is suited for high-level music and speech reinforcement applications requiring exceptional sonic quality with uncompromised reliability.

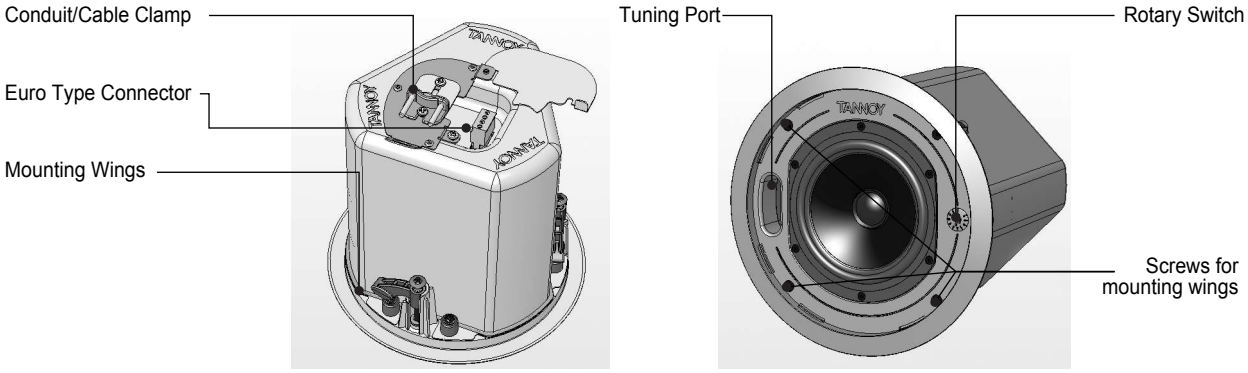


Fig 1.1: The blind-mount (BM) models come with a pre-fitted back-can

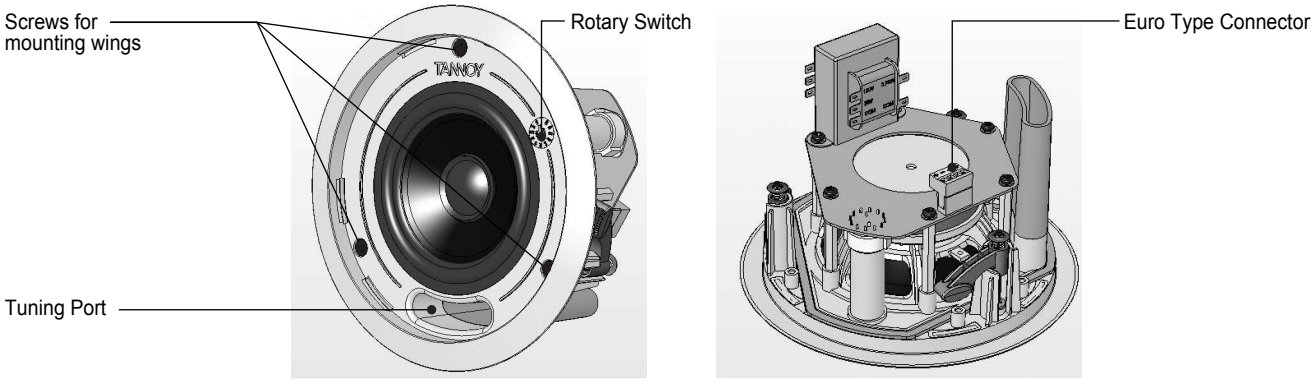


Fig 1.2: A pre-install (PI) model shown without optional pre-install back-can

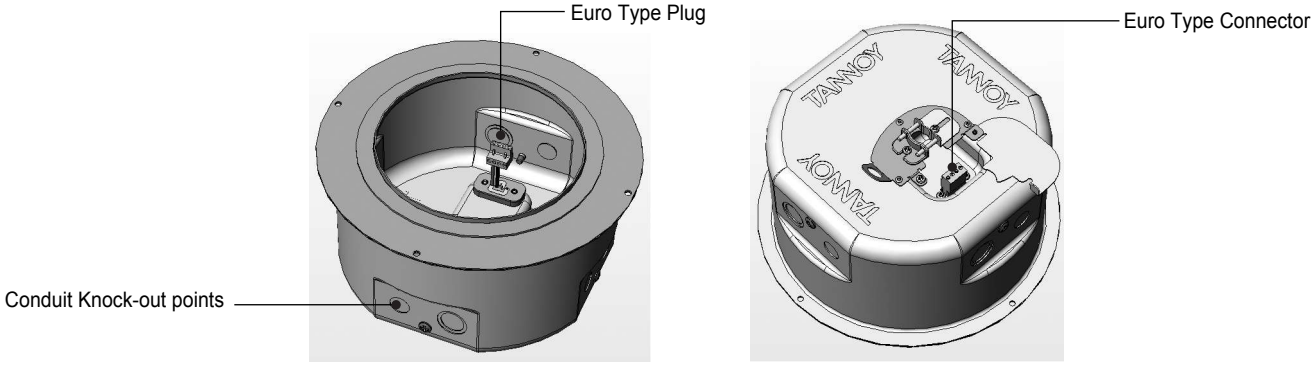
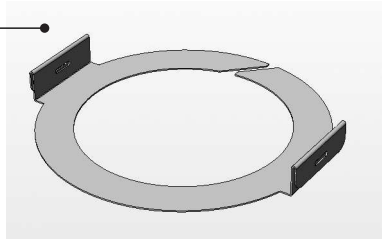


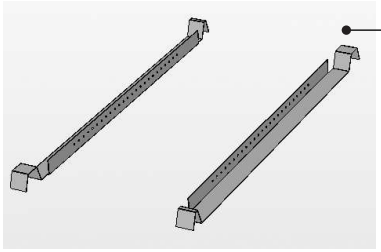
Fig 1.3: Optional pre-install (PI) back-can for PI models

4. ACCESSORIES:

Each product is supplied with the following accessories as standard:

C-Ring

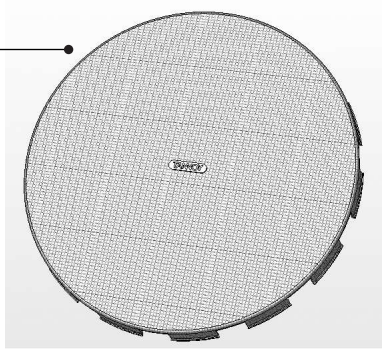


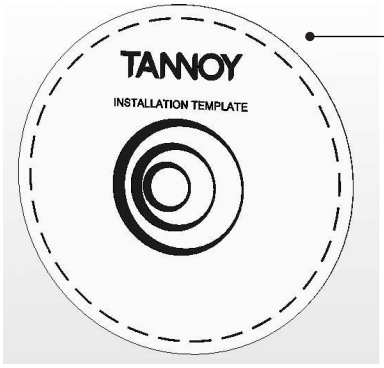


Tile bridge kit

Note: A tile bridge kit must always be used when installing into suspended ceiling tiles

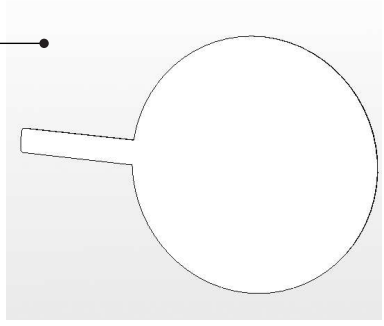
Grille





Cut-out template

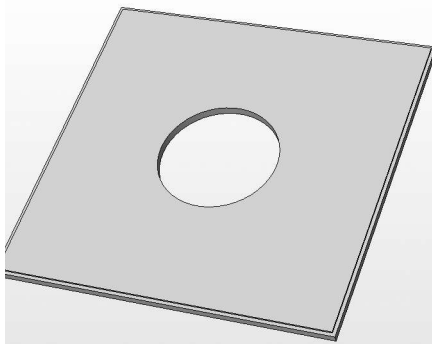
Paint Mask



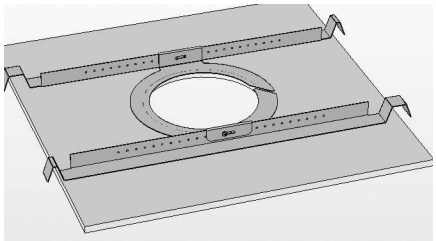
5.1 MECHANICAL INSTALLATION GUIDE FOR SUSPENDED CEILINGS

1 Remove the ceiling tile from its frame and place it on a flat surface. Mark the cut-out area on the ceiling tile by tracing around the template provided.

2 Cut out the hole in the ceiling tile using a circular saw or pad saw.

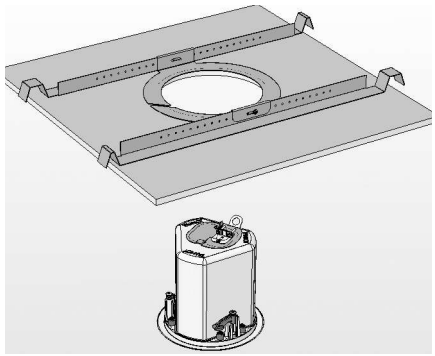


3 Place the C-ring and tile-bridge on top of the ceiling panel, aligning the C-ring over the hole, and screw the C-ring to the tile bridge using the fixings provided.

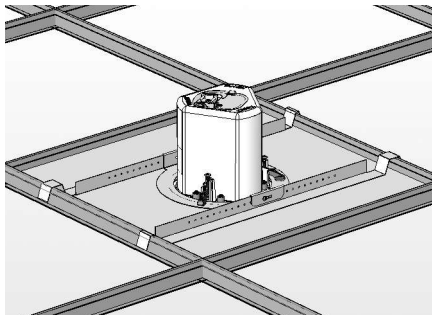


4 Slide the speaker assembly through the hole and turn the screws on the front of the speaker to extend the mounting wings. Tighten the screws until a firm grip is achieved.

DO NOT OVERTIGHTEN!



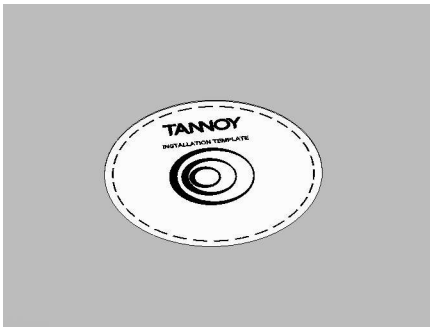
5 Slide the tile panel back into the suspended ceiling. The tile bridge ends will catch over the railings, supporting the weight of the speaker.



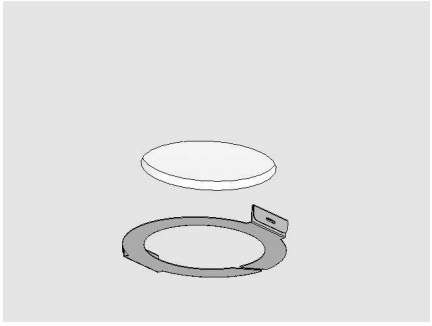
Go to section 6 for instructions on wiring and set-up instructions.

5.2 MECHANICAL INSTALLATION GUIDE FOR SHEET-ROCK (PLASTER BOARD) CEILINGS

1 | Mark the cut-out area on the ceiling by tracing around the template provided.



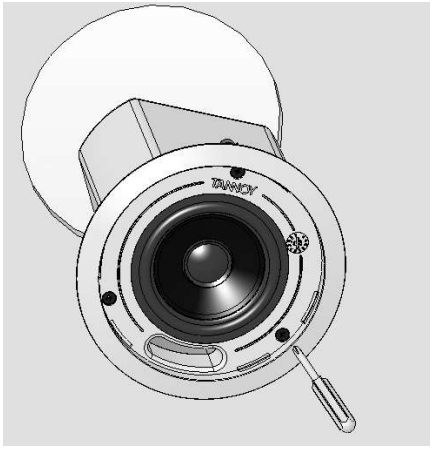
2 | Cut out the hole in the ceiling using a circular saw or pad saw, then slide the C-ring into the ceiling, aligning it over the cut-out hole).



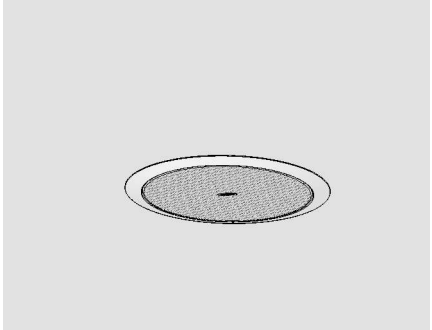
3 | Go to section 6 for wiring and set-up instructions then return to point 4 below.

4 | Slide the speaker assembly through the hole and turn the screws to extend the mounting wings. Tighten the screws until a firm grip is achieved.

DO NOT OVERTIGHTEN!



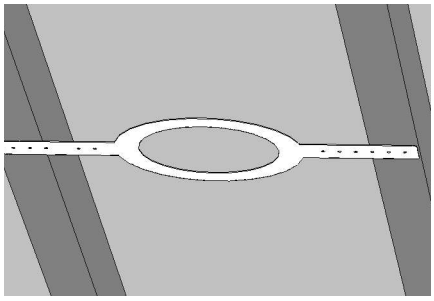
5 | Insert grille by pushing it onto the speaker.



5.3 MECHANICAL INSTALLATION INSTRUCTIONS FOR OPTIONAL PLASTER RING:

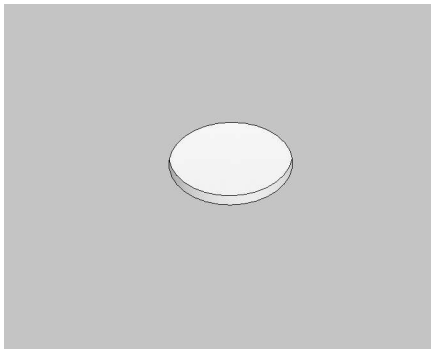
An optional plaster (mud) ring bracket is available from Tannoy. This bracket is designed to be pre-installed into newly constructed, non-suspended ceilings.

1 Nail or screw the plaster ring to the joists.



2 Lay the speaker wiring to where the speaker will be fitted and complete the plastering work on the ceiling.

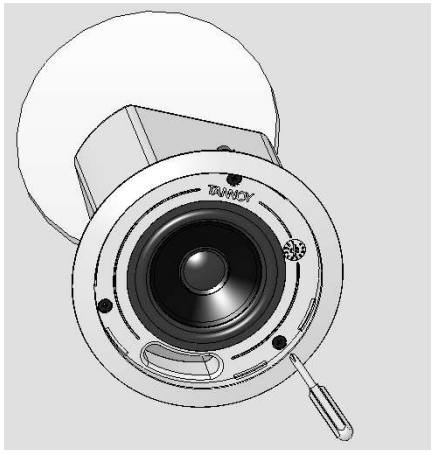
3 Cut out the hole in the ceiling using a circular saw or pad saw.



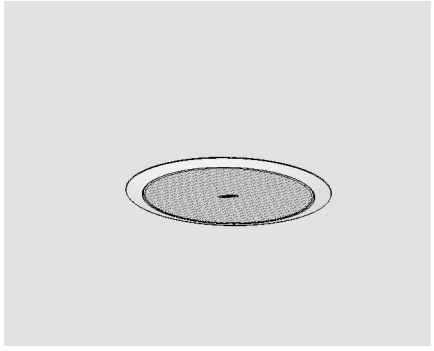
4 Go to section 6 for instructions on wiring then return to point 5 below.

5 Slide the speaker assembly through the hole and turn the screws to extend the mounting wings. Tighten the screws until a firm grip is achieved.

DO NOT OVERTIGHTEN!



6 Insert grille by pushing it onto the speaker.

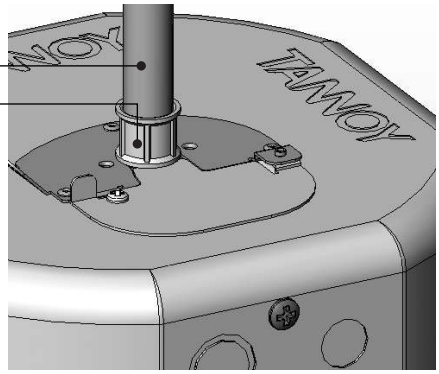


5.4 INSTRUCTIONS FOR OPTIONAL PRE-INSTALLATION BACK-CAN (PI MODELS ONLY):

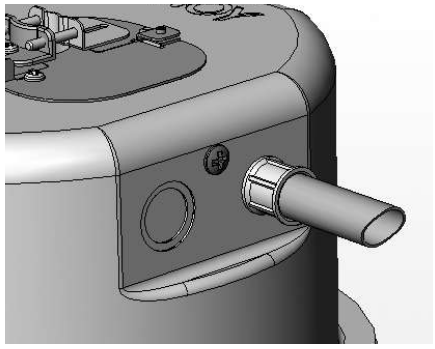
AN OPTIONAL PRE-INSTALL BACK-CAN IS AVAILABLE FOR ALL PI (PRE-INSTALL) MODELS. THIS BACK-CAN IS DESIGNED TO BE PRE-INSTALLED INTO NEWLY CONSTRUCTED, NON-SUSPENDED CEILINGS - SEE FIG 1.4 IN CHAPTER 3 FOR A SKETCH.

1 Attach the back-can to the installed conduit This can be attached in two ways:

a. You can use the clamp at the back of the pre-install back-can. The product will accept a squeeze connector with a thread size of up to 22mm: To remove the cable clamp, simply unscrew the threaded washer (under the wiring cover) which holds the cable clamp in place and replace it with a conduit squeeze connector.

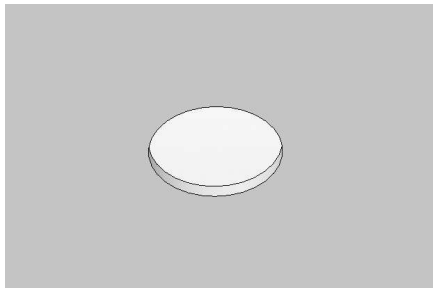


b. You can use any of the three knock-out points at the sides of the PI back-can (19mm, 22mm or 28mm diameter):



2 Lay the speaker wiring to where the speaker will be fitted and complete the plastering work on the ceiling.

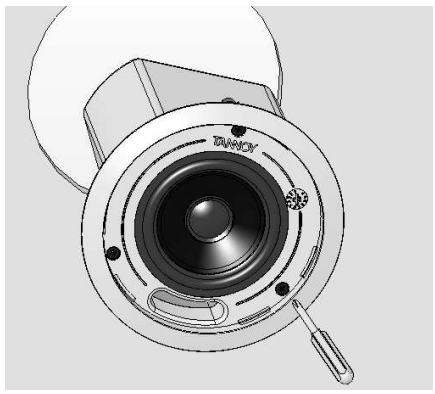
3 Cut out the hole in the ceiling using a circular saw or pad saw



4 Go to section 6 for instructions on wiring and setting up then return to point 6 below.

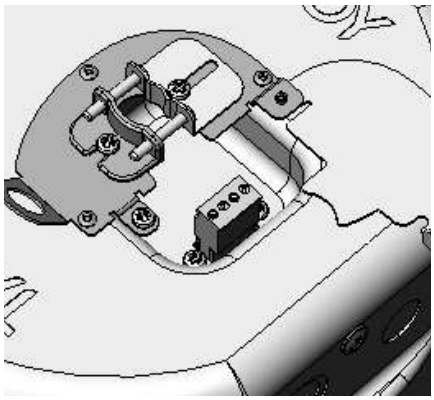
5 Slide the speaker assembly through the hole and turn the screws to extend the mounting wings. Tighten the screws until a firm grip is achieved.

DO NOT OVERTIGHTEN!



6. WIRING AND SETTING UP:

1 Open the wiring cover at the back of the speaker can to access the Euro type connector plug and socket.

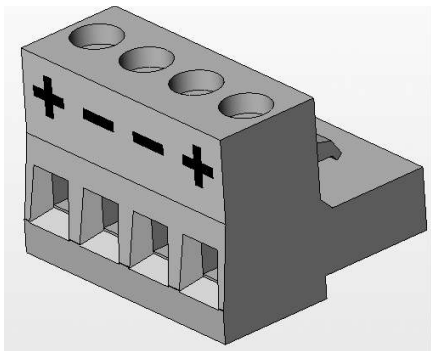


2 For connection to an amplifier, use pins 1 and 2:

- Pin 1 is positive
- Pin 2 is negative

For connection to additional speakers in a distributed line, pins 3 and 4 are in parallel where:

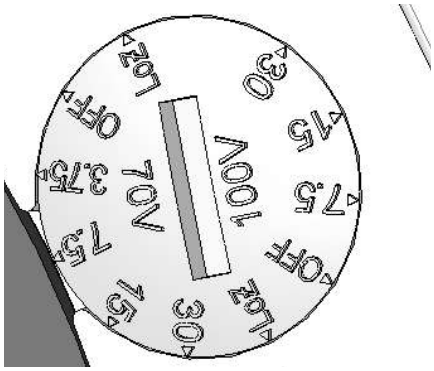
- Pin 3 is negative
- Pin 4 is positive



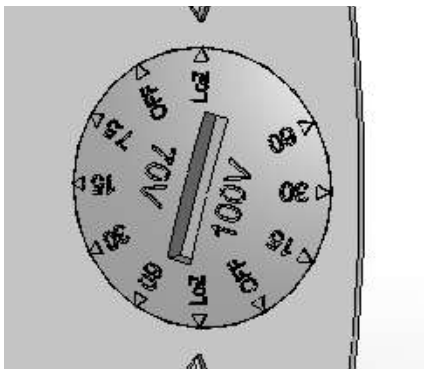
3 Close the wiring cover and tighten both screws on the cable clamp. Use the rotary switch located on the front of the unit to select whether you wish to use the speaker in a low-impedance or distributed-line application.

THE SPEAKER IS SUPPLIED IN LOW IMPEDANCE MODE. NEVER CONNECT THE SPEAKER TO A 70/100 VOLT AMPLIFIER WHILE IT IS SET FOR LOW IMPEDANCE.

All CMS 501 models use a 30W transformer. When using distributed-line systems, the transformer can be tapped at 30W, 15W and 7.5W, with an additional 3.75W tapping for 70.7V line systems.



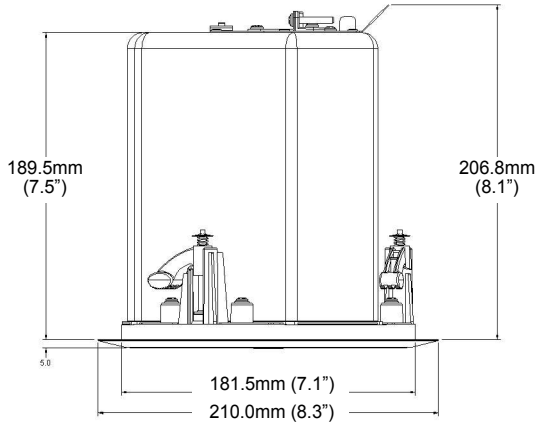
4 All CMS 601 models use a 60W transformer. When using distributed-line systems, the transformer can be tapped at 60W, 30W, and 15W, with an additional 7.5W tapping for 70.7V line systems.



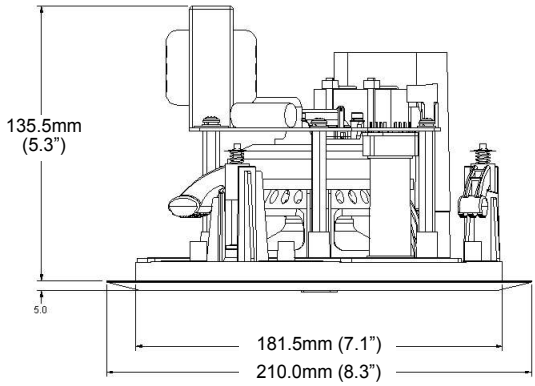
7.1 CMS 501 MODEL DIMENSIONS:

CMS 501 models TEMPLATE HOLE CUTOUT SIZE: 190mm

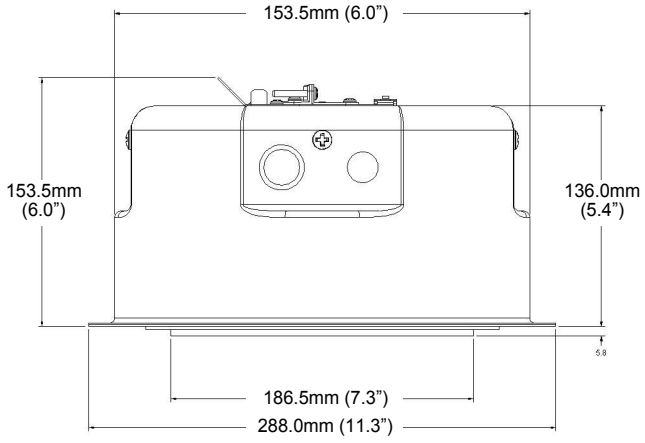
CMS 501 BM & CMS 501 DC BM:



CMS 501 PI & CMS 501 DC PI:



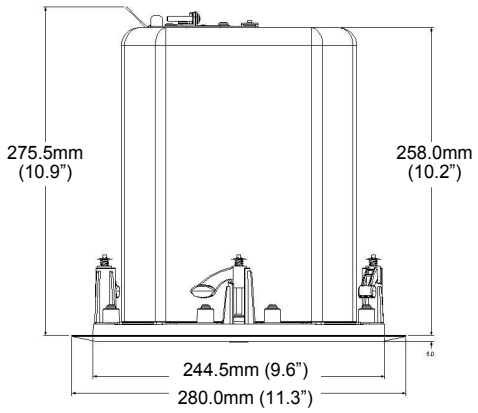
CMS 501 PI BACK CAN:



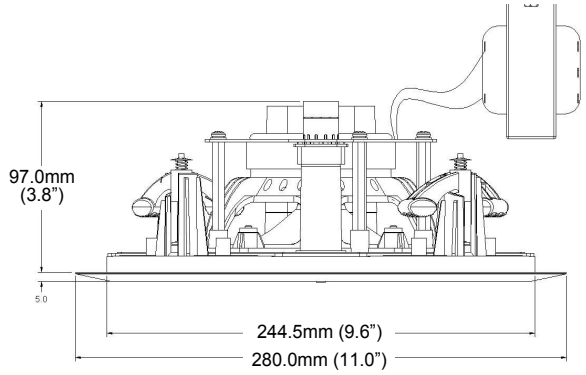
7.2 CMS 601 MODEL DIMENSIONS:

CMS 601 models TEMPLATE HOLE CUTOUT SIZE: 253mm

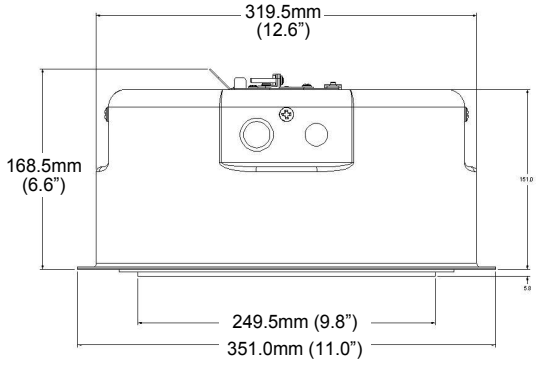
CMS 601 BM & CMS 601 DC BM:



CMS 601 PI:



CMS 601 PI BACK-CAN:



8. TECHNICAL SPECIFICATIONS:

MODEL	CMS501	CMS 501DC	CMS601	CMS 601DC
Features	Inductive Tweeter Symmetrical Constant Directivity	Dual Concentric Symmetrical Constant Directivity	Inductive Tweeter Symmetrical Constant Directivity	Dual Concentric Symmetrical Constant Directivity
Power Rating (Watts, RMS)	50 W	60 W	60 W	80 W
Power Rating (Watts, Peak)	100 W	120 W	120 W	160 W
Sensitivity (dB) 1W @ 1m **	89 dB	89 dB	91 dB	90 dB
Frequency Response* of Blind-Mount (BM) models (±3dB)	89 Hz -22 KHz	88 Hz -54 KHz	75 Hz -20 KHz	63 Hz – 20 KHz
Low frequency limit* of BM models (-10dB)	73 Hz	65 Hz	50 Hz	43 Hz
Frequency Response* of Pre-Install (PI) models (±3dB)	85 Hz -22 KHz	85 Hz -54 KHz	75 Hz -20 KHz	65 Hz – 20 KHz
Low frequency limit* of PI models (-10dB)	63 Hz	63 Hz	50 Hz	50 Hz
Included accessories	C Ring, tile bridge, paint mask, hole template, grille	C Ring, tile bridge, paint mask, hole template, grille	C Ring, tile bridge, paint mask, hole template, grille	C Ring, tile bridge, paint mask, hole template, grille
Optional accessories	Plaster (mud) ring	Plaster (mud) ring	Plaster (mud) ring	Plaster (mud) ring
Clamping design:	Security toggle clamp	Security toggle clamp	Security toggle clamp	Security toggle clamp
Line voltage:	70V/ 100V / Low Impedance (6 Ohms)	70V/ 100V / Low Impedance (8 Ohms)	70V/ 100V / Low Impedance (6 Ohms)	70V/ 100V / Low Impedance (8 Ohms)
Tappings via rotary switch, front mounted	30 W/ 15 W/ 7.5 W 3.75 W (70V-line only) LoZ (6 Ohms) OFF	30 W/ 15 W/ 7.5 W 3.75 W (70V-line only) LoZ (8 Ohms) OFF	60 W/ 30 W/ 15 W 7.5 W (70V-line only) LoZ (6 Ohms) OFF	60 W/ 30 W/ 15 W 7.5 W (70V-line only) LoZ (8 Ohms) OFF
Switch:	OFF position disconnects from line	OFF position disconnects from line	OFF position disconnects from line	OFF position disconnects from line
Option: Blind Mount (BM)	Complete with Fixed back can	Complete with Fixed back can	Complete with Fixed back can	Complete with Fixed back can
Option: Pre Install (PI)	Separate PI back can	Separate PI back can	Separate PI back can	Separate PI back can
Cable options	Cable clamp plus up to 22mm squeeze connector	Cable clamp plus up to 22mm squeeze connector	Cable clamp plus up to 22mm squeeze connector	Cable clamp plus up to 22mm squeeze connector
Conduit knock-out connections	3 sets of horizontal positions, 19/22/28mm diameters.	3 sets of horizontal positions, 19/22/28mm diameters.	3 sets of horizontal positions, 19/22/28mm diameters.	3 sets of horizontal positions, 19/22/28mm diameters.
Connector	Loop through with screw terminals	Loop through with screw terminals	Loop through with screw terminals	Loop through with screw terminals
Connector 4 way pin-out	IN: 1+ve 2-ve OUT: 3-ve 4+ve	IN: 1+ve 2-ve OUT: 3-ve 4+ve	IN: 1+ve 2-ve OUT: 3-ve 4+ve	IN: 1+ve 2-ve OUT: 3-ve 4+ve
Ceiling hole diameter BM	190mm (7.5") BM & PI	190mm (7.5") BM & PI	253mm (10.0") BM & PI	253mm (10.0") BM & PI
Ceiling hole diameter PI	190mm (7.5") BM & PI	190mm (7.5") BM & PI	253mm (10.0") BM & PI	253mm (10.0") BM & PI
Bezel Diameter	210mm (8.2")	210mm (8.2")	280mm (11.0")	280mm (11.0")
Max height: front of tile surface to safety lug. BM	207mm (8.2")	207mm (8.2")	276mm (10.9")	276mm (10.9")
Max height: back of tile surface to safety lug PI can	154mm (6.1")	154mm (6.1")	169mm (6.7")	169mm (6.7")
Approvals	CE	CE	CE	CE

*** Measured in ceiling (2π half space)**

**** 1W @ 1m, 2.83V for 8Ω, 2.4V for 6Ω**

9. PAINTING

If desired, the grille and baffle panel may be painted to match the surrounding décor.

Painting the baffle:

- Carefully mask off the driver assembly using the paint-mask provided to ensure that the paint does not come into contact with the cone and roll surround.
- Apply several thin coats of paint – this will provide a better finish than one overly thick coat.

Painting the grille:

- Carefully remove the acoustically transparent foam from the reverse side of the grille.
- Paint the grille and then replace the foam - several thin coats of paint will provide a better finish than one overly thick coat.
- Re-bond the foam to the grille over the entire area using a light spray-adhesive to avoid audible resonances.

10. WARRANTY

No maintenance of the CMS loudspeaker is necessary.

All Tannoy professional loudspeaker products are covered by a 5 year warranty from the date of manufacture subject to the absence of misuse, overload or accidental damage. Claims will not be considered if the serial number has been altered or removed. Work under warranty should only be carried out by a Tannoy Professional dealer or service agent. This warranty in no way affects your statutory rights. For further information please contact your dealer or distributor in your country. If you cannot locate your distributor please contact Customer Services, Tannoy Ltd at the address given below.

Customer Services
Tannoy Ltd.
Rosehall Industrial Estate
Coatbridge
Strathclyde
ML5 4TF
Scotland

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+44 1236 420199 (International)
Fax: 01236 428230 (National)
+44 1236 428230 (International)
E-mail: enquiries@tannoy.com

DO NOT SHIP ANY PRODUCT TO TANNOY WITHOUT PREVIOUS AUTHORISATION

Our policy commits us to incorporating improvements to our products through continuous research and development. Please confirm current specifications for critical applications with your supplier.

11. DECLARATION OF CONFORMITY:

The following apparatus is/are manufactured in the United Kingdom by Tannoy Ltd of Rosehall Industrial estate, Coatbridge, Scotland, ML5 4TF and conform(s) to the protection requirements of the European Electromagnetic Compatibility Standards and Directives relevant to Domestic Electrical Equipment. The apparatus is designed and constructed such that electromagnetic disturbances generated do not exceed levels allowing radio and telecommunications equipment and other apparatus to operate as intended, and, the apparatus has an adequate level of intrinsic immunity to electromagnetic disturbance to enable operation as specified and intended.

Details of the Apparatus:	Tannoy Contractor Loudspeaker
Model Numbers:	CMS 501 BM CMS 501 DC BM CMS 501 PI CMS 501 DC PI CMS 601 BM CMS 601 DC BM CMS 601 PI CMS 601 DC PI
Applicable Standards:	EN 50081-1 Emission EN 50082-1 Immunity
Electrical Safety:	EN 60065

Signed:

Position: Engineering Director - Professional Products

Tannoy Professional

Date: 14/12/2005

For Tannoy Ltd

Tannoy has a policy of continuous improvement and this specification sheet provides the latest information at the time of printing.
All specifications may be subject to further change. Please contact the Tannoy website for the latest information.

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