

CIE-GROUP'S  
**AVBIGBook**

[www.cie-group.com](http://www.cie-group.com)



www.cie-group.com 



bigger - better - faster - wider

The brand new CIE-Group website is bigger and better than ever before; faster and easier to search through 1000's of products for the PA, AV, CCTV, electronics and test professional.

**24-7  
365**

Full customer access to information on 1000's of products and ordering facilities  
**24 hours a day, 7 days a week, 365 days of the year**



**Fully searchable product database** with product comparison facility, alternative & related product suggestions.



**Secure Trade Log in Zone** for CIE-Group customers, providing customer buy prices and order history information.



**Accurate customer-specific pricing** (available in GBP, Euros and Dollars).



**Per-product stock level information** for ease of ordering.



**Secure e-commerce facilities** - customer ordering made easy; wherever and whenever you need it!



# Contents

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Introduction	4
How To Order	5
Symbol Glossary	7
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• Loudspeakers	9 - 56
• Amplifiers	57 - 80
• Audio Signal Processing	81 - 94
• Audio Signal Generation	95 - 100
• Audio System Tools	101 - 115
• Microphones (Wired)	117 - 148
• Microphones (Wireless)	149 - 157
• Portable PA Systems	159 - 168
• Soundfield	169 - 175
• Induction Loops	177 - 191
• Racks & Cabinets	193 - 204
• Brackets	205 - 218
• Interactive & Projectors	219 - 228
• Digital Signage & 3D	229 - 236
• AV Signal Distribution	237 - 344
• Faceplates	345 - 352
• Cables	353 - 382
• Connectors	383 - 392
• CCTV Cameras	393 - 411
• DVRs	413 - 420
• CCTV Accessories	421 - 424
• CCTV Software	425 - 426
• Monitors & Screens	427 - 434
• Testers	435 - 448
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Installation Advice	449 - 456
PART NUMBER INDEX	457 - 462

## Company Profile

CIE-Group is one of the industry's longest established providers. With a history of almost 50 years providing innovative, high quality, cost effective solutions, we have developed a diverse and comprehensive portfolio of products to meet the demands of the AV, commercial audio, CCTV, entertainment, communications and OEM business sectors.

Committed to providing industry with innovative and unsurpassed pre- and post-sales service, our products are used by many of the UK's leading audio visual installers, sound system providers and blue chip companies, as well as distribution, public/private sector and high street leading brands.

CIE-Group is an exclusive 'tier 1' distributor for many market leading professional brands. Key to our success has been the diversity and innovation of our continually-developing product range, combined with the valuable relationships we build with our manufacturers and customers.

This partnership ensures direct access to an expert UK and international team of sales, training and technical advisers to support our customers all the way from initial site surveys, to product demonstrations to on-site end-client product training and support.

## More than just a distributor...

### What makes CIE-Group different to other distributors and resellers?

Giving our customers all the support and advice they need to make the best professional, informed decisions on the products they specify without compromise.

From simply providing detailed product information, training and advice, to UK-based service & repair facilities, assisting customer site surveys & demonstrations, to 'ready to install' full rack system design and build services; CIE-Group pride ourselves on supporting our customers – and your end clients – in achieving the very best results from the full range of products and services we provide.





## How to Order

Our Sales Office is open between the hours of **8.30am** and **5.30pm** five days a week to service your orders. Our Sales Team is waiting to provide information and support on our full product range, in addition to our extensive on-line product and technical database, should you require it. We can accept your orders by phone, fax, email, online or by post.

And now with our new e-commerce facility, ordering is available 24 hours a day, every day of the week at [www.cie-group.com](http://www.cie-group.com).



**Tel:** +44 (0)115 9770075



**Fax:** +44 (0)115 9770081



**Email:** [info@cie-group.com](mailto:info@cie-group.com)



**www:** [www.cie-group.com](http://www.cie-group.com)



**Mail to:** CIE-Group Ltd Widdowson Close Blenheim Ind Est  
Bulwell Nottingham NG6 8WB UK



### Methods of Payment:

- **Credit Account** (Contact the sales office for an application form)
- **Credit or Debit Card** (Most major cards accepted online or via telephone)
- **Cheque with order** (Clearance required before goods can be released)
- **Bank Transfer**



### Delivery Options:

**Standard Delivery:**

Orders received before 3.30pm - 1~2 working days (Registered Carrier)

Orders received post 3.30pm - 2~3 working days (Registered Carrier)

(Charges based on consignment weight)

**Next Day Delivery/Next Day AM/Saturday delivery/International**

The CIE-Group Sales Team will advise on a range of flexible options to meet your specific needs on delivery times, dates and costs.

# Affiliates

Approvals and memberships to which CIE-Group has a long term affiliation.



Certificate No. FS 31532

CIE-Group is registered with the **British Standards Institute's ISO9001:2008 Quality Assurance System**, which guarantees our customers the very highest quality levels in Distribution and Design & Installation Planning for commercial sound, AV, CCTV and electronics equipment.



**A long-term member of PLASA** - the Professional Lighting and Sound Association - the world's leading body for suppliers to the professional installation, events and entertainment technology industries.



**An established member of BESA** - the British Educational Suppliers Association - ensuring high quality, innovative products and services for the education sector.



**A key Supporting Member of ISCE** - The Institute of Sound and Communications Engineers - the UK's leading collective of professional commercial AV engineers, suppliers and designers.

# Symbol Glossary

To highlight any technologies, connectivity or compliance relative to each product, you'll find a series of symbols at the top of each product page.

Please use the below key as an explanation of each symbol...



100v Line Audio System



Low Impedance Audio System



Channel 38 Compliant



Ingress Protection Rating



EN54 - Compliant for Fire Alarm Systems



Induction Loop Facility



RS232 Connectivity



RF Immunity



MP3 Audio File Player



I.P. Connectivity



HDMI - High Definition Multimedia Interface



DisplayPort



DVI - Digital Video Interface



3D Ready



HD Ready



USB - Universal Serial Bus



Bluetooth Wireless Connectivity



At CYP we understand that time is of the essence for every installation. If an installer runs into connectivity issues on site, CYP have an extensive range of effective 'get out of jail' solutions to help

# GET OUT OF JAIL USING THE ESSENTIAL CYP SOLUTIONS

Now available from CIE-Group - see pages 237~344 for details of the full range.





Ceiling Speakers	10 ~ 15
Column Speakers	16 ~ 18
Suspended Ball Speakers	19 ~ 23
Sound Projectors	24 ~ 26
Horn Speakers	27 ~ 32
Wall Speakers	33
Monitor Speakers	34 ~ 37
Cabinet Speakers	38 ~ 40
NXT Sound Panel Speakers	42 ~ 49
IP-Addressable Speaker Systems	50 ~ 56

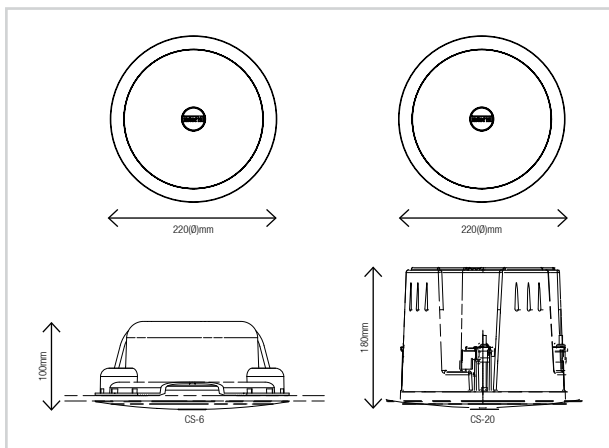
- **CS-6: 6W Ceiling Speaker**
- **CS-20: 20W Ceiling Speaker**

These high quality, fast-fit ceiling loudspeakers feature premium grade drivers for impressive acoustic performance and long-term reliability.

Ideal for paging and ambient background music applications such as offices, retail, waiting rooms, corridors, etc...

#### Features:

- Metal construction
- Fast-fix solution
- Simple unobtrusive design
- Premium grade speaker drivers
- CS-20 supplied with comprehensive hardware/rails as standard



#### Specifications:

Model:	CS-6	CS-20
Rated Power	6W	20W
Impedance	COM, 1.7k $\Omega$ , 4k $\Omega$ , 8k $\Omega$ 6W/1.7k $\Omega$ , 3.5W/4k $\Omega$ 1.75W/8k $\Omega$	COM, 500k $\Omega$ , 1k $\Omega$ , 2k $\Omega$ 20W/500k $\Omega$ , 10W/1k $\Omega$ 5W/2k $\Omega$
Frequency Response	150Hz ~ 15kHz	150Hz ~ 15kHz
SPL @ 1W/1m	92dB	92dB
Dimensions	220(Ø) x 100(D) mm	230(Ø) x 180(D) mm
Weight	0.7kg	2kg



- **DL06-165T:** 6W Quick-Fit Ceiling Speaker
- **DL06-165T/BS5839:** 6W Ceiling Speaker

An all-round performer, the DL06-165T ceiling speaker is ideal for any paging and low ambient background music reproduction in many applications such as offices, retail, waiting rooms, corridors, etc.

Metal construction and high quality 100v transformer complete this installation-friendly ceiling speaker system.

Also available as an EN54-compliant version for approved fire alarm systems.

**Features:**

- Metal construction
- White RAL9010
- Quick-fit mounting system
- High quality 100v transformer
- Full range 6½" driver
- Optional steel backbox - F165



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

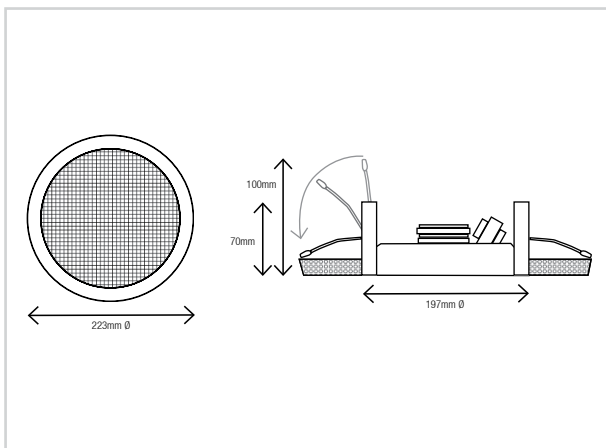
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

Model:	DL06-165T	DL06-165T/BS5839
100v Power Tappings	1.5, 3, 6W	1.5, 3, 6W
Frequency Response	100Hz ~ 16kHz	100Hz ~ 16kHz
SPL@1W/1m	97.9dB	97.9dB
Ceramic Terminal	No	Yes
Thermal Fuse	No	Yes
Heat Resistant Cable	No	Yes
Colour	White RAL9010	White RAL9010
Material	Metal	Metal
Dimensions	220(Ø) x 100(D) mm	220(Ø) x 120(D) mm
Weight	1.3kg	1.3kg

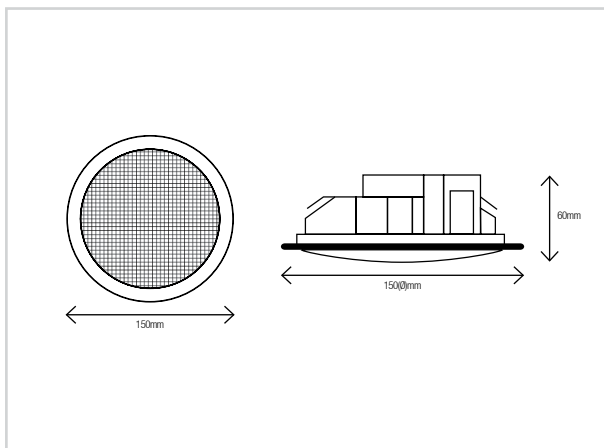
Need help choosing the right product?  
 Call our technical support team now on:  
**Tel. +44(0)115 977 0075**

## • CSL106T: 6W Ceiling Loudspeaker

Built-in speaker with painted metal grille for voice and background music applications.

### Features:

- Dual cone loudspeaker with 5" woofer
- Power 3, 6W with 100v transformer
- Hole for mounting 150mm
- White RAL9016



### Specifications:

Model:	CSL106T
Rated Power	3, 6W
Loudspeaker	Dual cone, 5" woofer
Frequency Response	100Hz ~ 20kHz
SPL @ 1W/1m	93dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	150(Ø) x 60(D) mm
Cut-out Diameter	150(Ø) mm
Weight	0.5kg

• **CSL520TIC: 20W Ceiling Loudspeaker**

ABS in-ceiling speaker with metal protection grille for voice and background music applications.

**Features:**

- White RAL9016
- Metal back cover
- Coaxial loudspeaker with 5" woofer and 1/2" tweeter
- 88dB ±3dB sensitivity @ 1W/1m
- Nominal power 2.5/5/10/20W/8Ω with 100v line transformer
- Hole for mounting 170mm



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

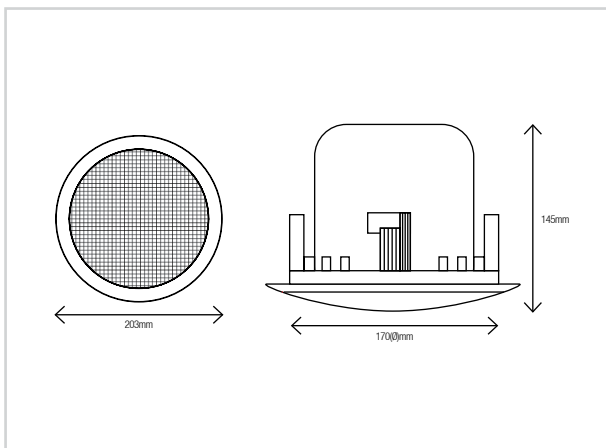
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

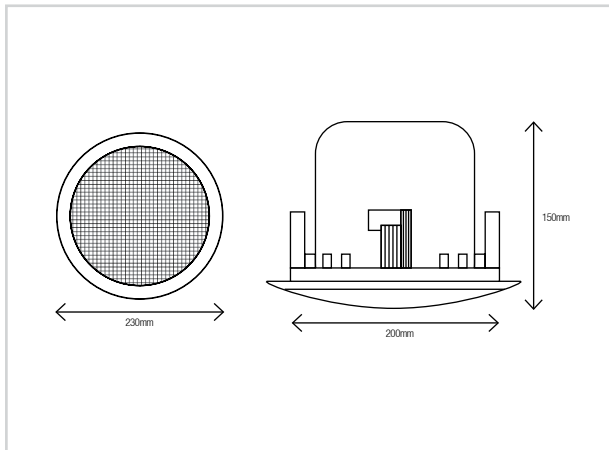
Model:	CSL520TIC
Rated Power	2.5, 5, 10, 20W/8Ω
Loudspeaker	Coaxial loudspeaker, 5" woofer, 1/2" tweeter
Frequency Response	100Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	203(Ø) x 145(D) mm
Cut-out Diameter	170(Ø) mm
Weight	1.8kg

## • CSL630TIC: 30W Ceiling Loudspeaker

ABS in-ceiling speaker with metal protection grille.

### Features:

- White RAL9016
- Metal back cover
- Coaxial loudspeaker with 6" woofer and 1/2" tweeter
- 88dB  $\pm$ 3dB sensitivity @ 1W/1m
- Nominal power 3.8/7.5/15/30W/8 $\Omega$  with 100/70v line transformer
- 90Hz ~ 20KHz Frequency Response
- Hole for mounting 200mm



### Specifications:

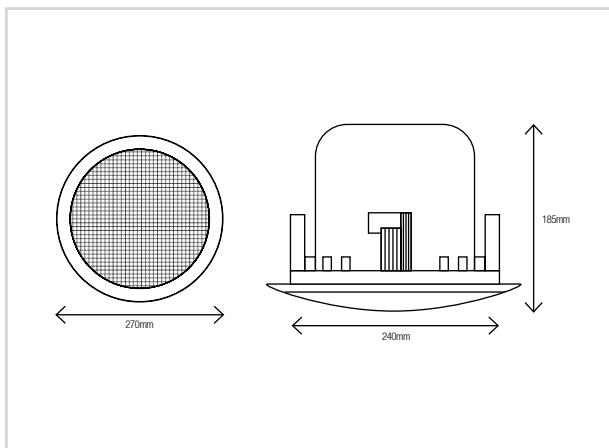
Model:	CSL630TIC
Rated Power	3.8, 7.5, 15, 30W/8 $\Omega$
Loudspeaker	Coaxial loudspeaker, 6" woofer, 1/2" tweeter
Frequency Response	90Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	230(Ø) x 150(D) mm
Cut-out Diameter	200(Ø) mm
Weight	2.3kg

## • CSL840TIC: 40W Ceiling Loudspeaker

ABS in-ceiling speaker with metal protection grille.

### Features:

- White RAL9016
- Metal back cover
- Full range 2.5" Dual Cone
- 87dB  $\pm$ 3dB sensitivity @ 1W/1m
- Nominal power 1.5/3/6W with 100v line transformer
- 120Hz ~ 20KHz Frequency Response
- Hole for mounting 240mm



### Specifications:

Model:	CSL840TIC
Rated Power	5, 10, 20, 40W/8 $\Omega$
Loudspeaker	Coaxial loudspeaker, 6" woofer, 1/2" tweeter
Frequency Response	50Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	270(Ø) x 185(D) mm
Cut-out Diameter	240(Ø) mm
Weight	3.1kg

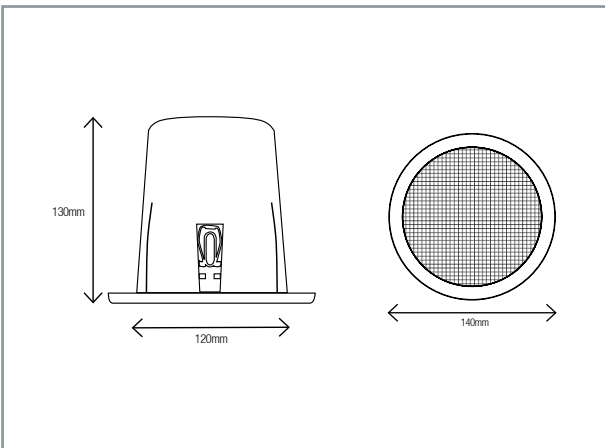
● **MCSL006/TWP:**  
6W Moisture-Proof Ceiling Speaker

This IP55-approved unit is ideal for installation in damp, humid environments such as changing rooms, bathrooms or even outdoors in protected areas.

One-piece construction and quick-fit spring mounting system complete a versatile package.

**Features:**

- Water / ingress resistance (IP55 rated)
- One-piece construction
- White RAL 9016
- Multi-tapping 100v transformer
- Quick-fit mounting system



**Specifications:**

<b>Model:</b>	<b>MCSL006/TWP</b>
100v Power Tappings	1.5, 3, 6W
Frequency Response	150Hz ~ 18kHz
SPL @ 1W/1m	91dB
Colour	White RAL 9016
Material	ABS
Dimensions	140(Ø) x 130(D) mm
Weight	0.9kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

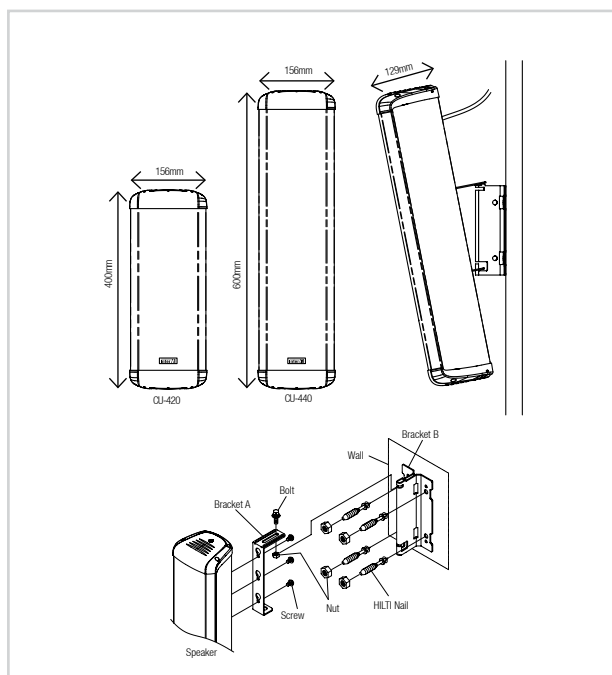
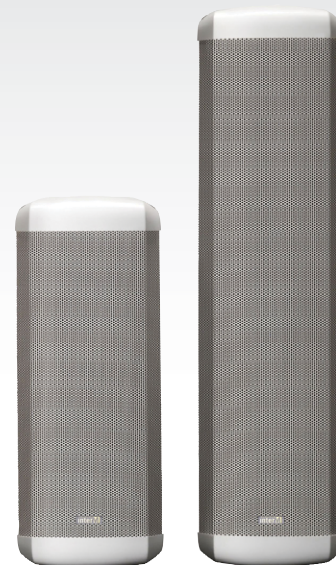
- **CU420:** 20W Indoor Column Speaker
- **CU440:** 40W Indoor Column Speaker

Inter-M's latest addition to their column speaker range, the new CU400 Series are stylish, high-quality loudspeakers featuring improved frequency response for both voice and music applications.

Ideal for church, mosque, high quality background music and AV systems.

#### Features:

- Stylish new design
- Robust construction
- Multi-position mounting bracket
- 100v Power tapings (rated and ½ power)
- Screw terminal connection



#### Specifications:

Model:	CU420	CU440
Rated Power	10, 20W	20, 40W
Frequency Response	180Hz ~ 14kHz	180Hz ~ 14kHz
SPL @ 1W/1m	94dB	97dB
Dimensions	156(W) x 400(H) x 129(D) mm	156(W) x 600(H) x 129(D) mm
Weight	3kg	5kg



- **CU520:** 20W Outdoor Column Loudspeaker
- **CU540:** 40W Outdoor Column Loudspeaker

Stylish and robust loudspeakers for installation in both indoor and outdoor applications.

Manufactured from aluminium extrusion with a steel grille, the loudspeaker drivers are proofed to withstand damp environments and can be used in indoor or protected outdoor installations, in shopping centres, car parks, atriums and leisure centres.

**Features:**

- Proofed drivers / loudspeakers for use in damp environments
- Robust aluminium construction
- Multi-position mounting bracket
- 100v Power tapplings (rated and 1/2 power)
- Screw terminal connection



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

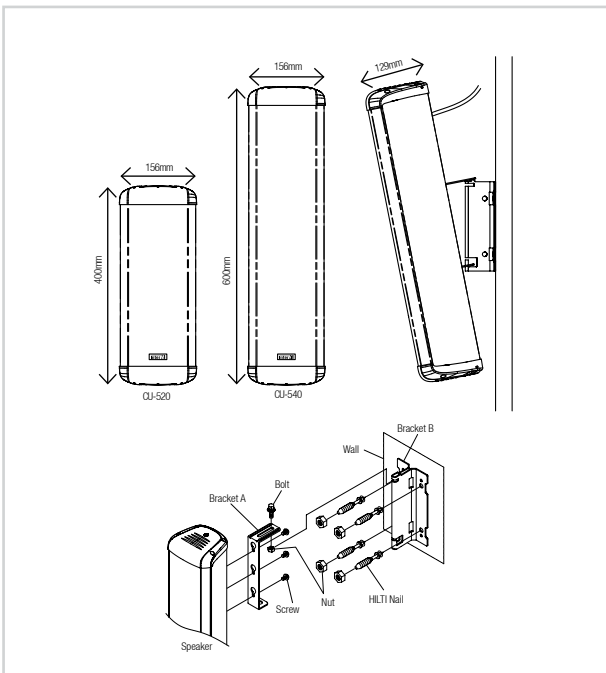
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

Model:	CU520	CU540
Rated Power	10, 20W	20, 40W
Frequency Response	180Hz ~ 14kHz	180Hz ~ 14kHz
SPL @ 1W/1m	94dB	97dB
Dimensions	156(W) x 400(H) x 129(D) mm	156(W) x 600(H) x 129(D) mm
Weight	3kg	5kg

- **CU920:** 20W Indoor Column Loudspeaker
- **CU930:** 30W Indoor Column Loudspeaker
- **CU940:** 40W Indoor Column Loudspeaker

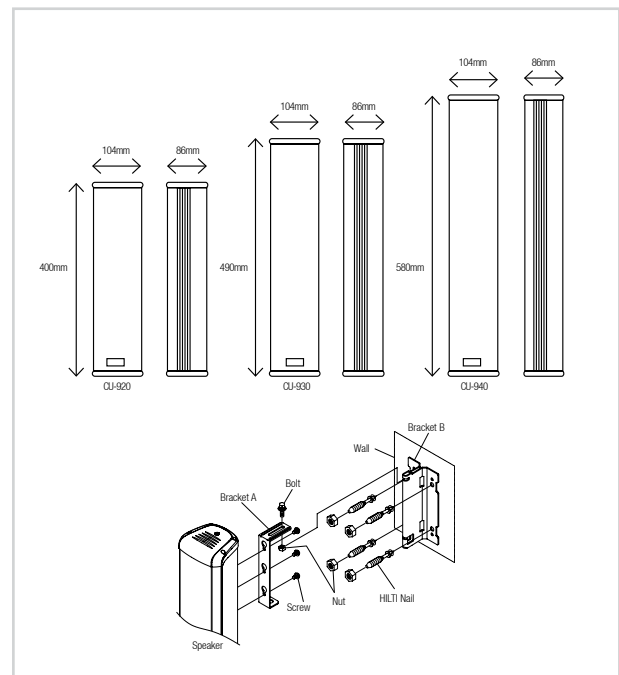
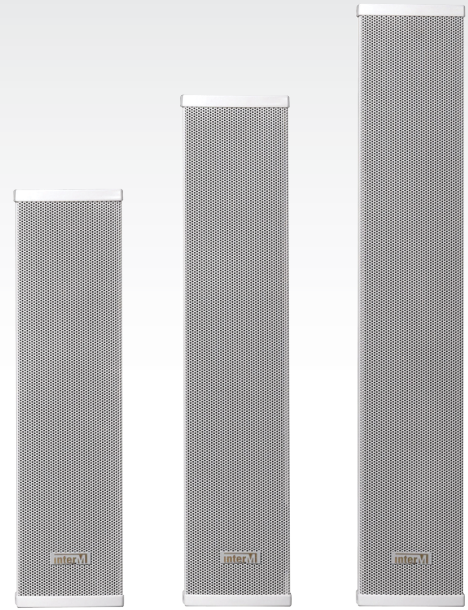
Attractive, slimline column loudspeakers for installation in church, conference and sports hall applications.

These models are also ideal for installation in audio visual applications, when placed either side of a projector screen or plasma/LCD screen.

Finished in matt white, the units also feature perforated steel grille and are supplied with multi-position wall bracket.

#### Features:

- Attractive slimline design
- Multi-position bracket
- 100v Power tapplings (rated and ½ power)
- Screw terminal connection



#### Specifications:

Model:	CU920	CU930	CU940
Rated Power	10, 20W	15, 30W	20, 40W
Frequency Response	220Hz ~ 15kHz	220Hz ~ 15kHz	220Hz ~ 15kHz
SPL @ 1W/1m	90dB	91dB	93dB
Enclosure Material	Aluminium	Aluminium	Aluminium
Dimensions	104(W) x 400(H) x 86(D) mm	104(W) x 490(H) x 86(D) mm	104(W) x 580(H) x 86(D) mm
Weight	2.35kg	2.85kg	3.35kg

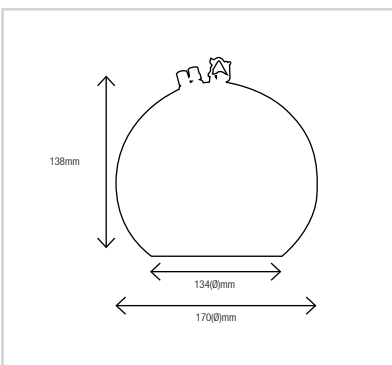
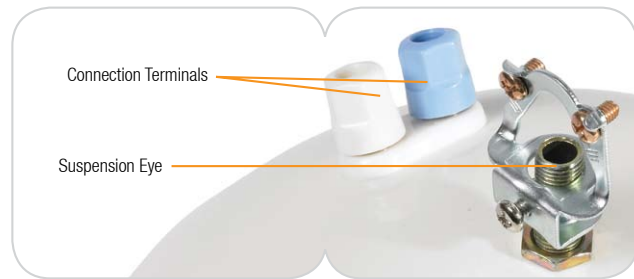
**B170T EN: 6W Suspended Ball Speaker**

Compact, metal Suspended Ball Speaker ideal for retail, warehouse and open plan applications.

Termination is made by binding posts and tappings controlled via a screwdriver-adjustable switch. The product's two-way driver gives excellent voice and music reproduction.

**Features:**

- Compact size
- Binding post terminal connection
- Adjustable tapping selector
- Suspension eye
- White RAL9010
- Two-way, full-range driver
- 100v Power tappings



**Specifications:**

Model:	B170T EN
100v Power Tappings	2, 4, 6W
Frequency Response	100Hz - 15kHz
SPL @ 1W/1m	89dB
Colour	White RAL 9010
Material	Metal
Approx. Coverage	45m <sup>2</sup> @ 3m height
Dimensions	170(Ø) x 138(D) mm
Weight	1.3kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

## • B250T EN: 15W Suspended Ball Speaker

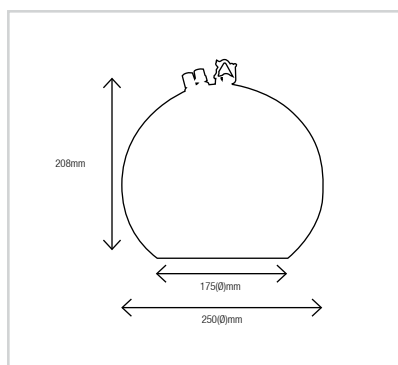
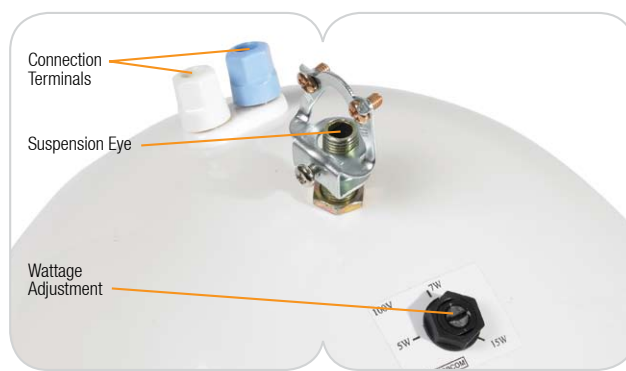
The industry standard for the distribution and retail 'shed' sectors, the B250T EN offers excellent voice clarity and music reproduction.

The unit features a 17cm bass unit with coaxial tweeter within a robust, yet lightweight ABS housing.

Cable termination is via binding posts and tappings adjusted via multi-step switch. The unit is supplied with a suspension eye for safety and security.

### Features:

- Lightweight ABS construction
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full range coaxial driver
- 100v Power tappings



### Specifications:

Model:	B250T EN
100v Power Tappings	5, 7, 15W
Frequency Response	70Hz - 20kHz
SPL @ 1W/1m	91dB
Colour	White RAL 9010
Material	ABS
Approx. Coverage	60m <sup>2</sup> @ 4.5m height
Dimensions	250(Ø) x 208(D) mm
Weight	3.5kg

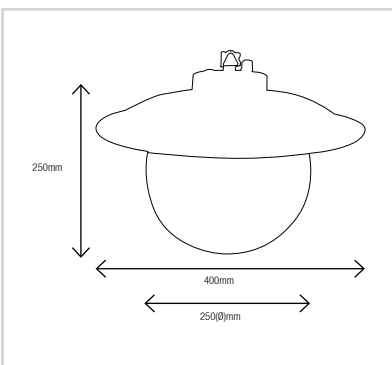
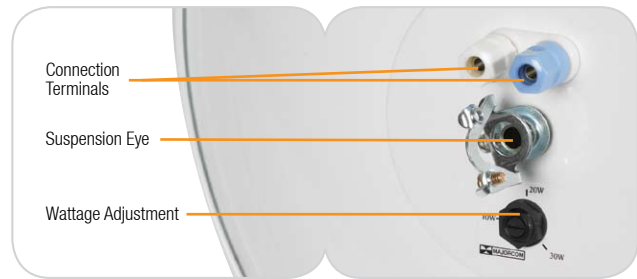
**IMC250T EN: 30W Omni-suspended Loudspeaker**

Using a parabolic dish to distribute the sound over a larger area, the IMC250T EN is ideal in larger retail outlets, shopping centres, distribution warehouses, etc.

Screw terminals and adjustable wattage selection are standard features of this cost-effective choice, which provides up to 5 times more coverage than conventional loudspeakers. Supplied with suspension eye for safety and security.

**Features:**

- ABS (Ball) / Metal (Dish)
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full-range, two-way driver
- 100v Power tapplings



**Specifications:**

Model:	IMC250T EN
100v Power Tappings	10, 20, 30W
Frequency Response	70Hz ~ 20kHz
SPL @ 1W/1m	90dB
Colour	White RAL 9010
Material	ABS/Metal
Approx. Coverage	200m <sup>2</sup> @ 6m height
Dimensions	Ball: 250(Ø) mm Dish: 400(Ø) x 250(D) mm
Weight	3.5kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

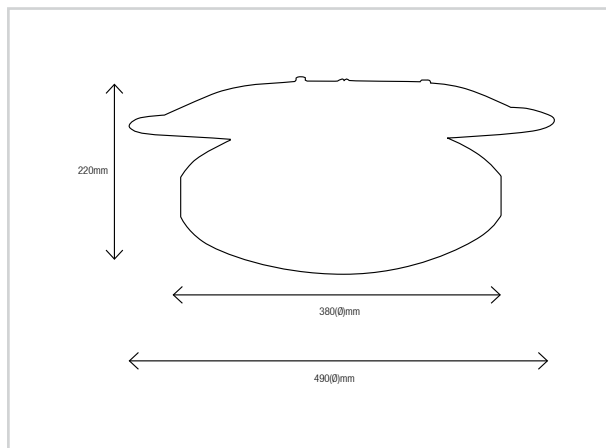
- **IMC300T:** 30W Low Profile Omni-suspended Loudspeaker
- **IMC400T:** 60W Low Profile Omni-suspended Loudspeaker

Offering the same advantages as the IMC250TEN, the IMC300T and IMC400T models are designed for installation in environments with lower height ceilings such as car parks and mezzanine areas, but are just as effective in regular installations.

Fitted with 3-way loudspeaker systems, both models offer HiFi quality sound.

#### Features:

- ABS (Ball) / Metal (Dish)
- Multicore termination
- Multi-suspension points
- White RAL 9010
- HiFi quality sound
- 100v Power tapings
- Low Profile



#### Specifications:

Model:	IMC300T	IMC400T
100v Power Tappings	10, 20, 30W	20, 40, 60W
Frequency Response	50Hz ~ 20kHz	50Hz ~ 20kHz
SPL @ 1W/1m	89dB	89dB
Colour	White RAL 9010	White RAL 9010
Material	ABS/Metal	ABS/Metal
Approx. Coverage	200m <sup>2</sup> @ 6m height	300m <sup>2</sup> @ 6m height
Dimensions	500(Ø) x 165(D) mm	500(Ø) x 165(D) mm
Weight	4.5kg	5.0kg



**IMC500T: 120W Omni-suspended Loudspeaker**

Largest of the Omni Series, the IMC500T is at home covering large areas such as sports halls, ice rinks, large warehouses, exhibition halls, etc.

This speaker provides a full range of music and high intelligibility voice reproduction; ideal for large scale, acoustically challenging environments.

**Features:**

- ABS
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full range two-way driver
- 100v Power tapings



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

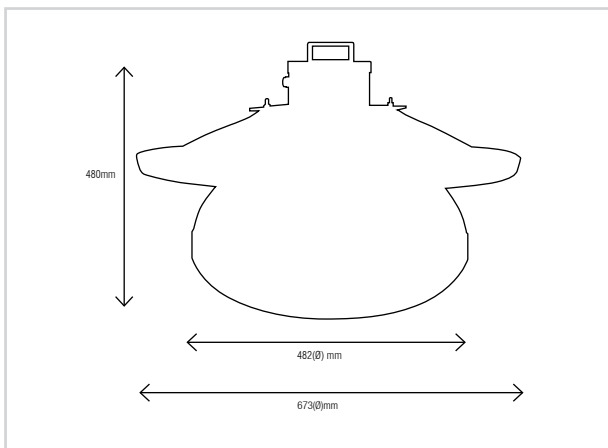
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

Model:	IMC500T
100v Power Tappings	60, 120W
Frequency Response	50Hz ~ 20kHz
SPL @ 1W/1m	97dB
Colour	White RAL 9010
Material	ABS
Approx. Coverage	500m <sup>2</sup> @ 7m height
Dimensions	673(Ø) x 480(D) mm
Weight	15kg

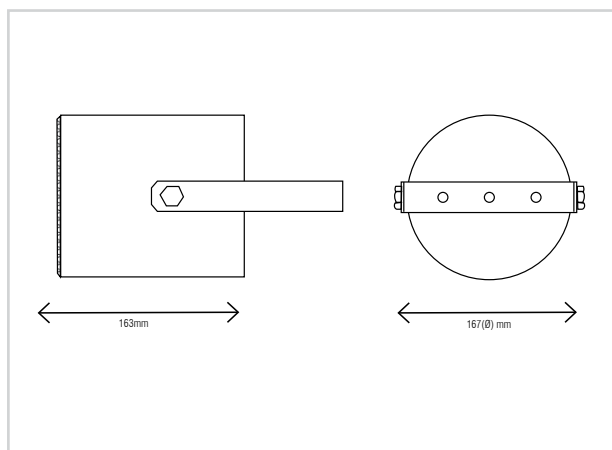
- **DAS10-130T:** 10W Metal Sound Projector
- **DAS10-130T-EN54:** 10W EN54-compliant Metal Sound Projector 

More robust metal version of the DAP Series projector, providing the same features and benefits but in a metal housing for added vandal resistance.

EN54-compliant version available for fire alarm systems.

#### Features:

- Robust metal case
- Weather / ingress resistance (IP65 rated)
- 100v Power tapping
- Voice & music capacity
- White RAL9010



#### Specifications:

Model:	DAS10-130T	DAS10-130T-EN54
100v Power Tappings	1.5, 3, 6, 10W	1.5, 3, 6, 10W
Frequency Response	200Hz ~ 16kHz	200Hz ~ 16kHz
SPL @ 1W/1m	94.1dB	94.1dB
Colour	White RAL9010	White RAL9010
Material	Metal	Metal
IP Rating	IP65	IP65
Dimensions	167(Ø) x 163(D) mm	167(Ø) x 163(D) mm
Weight	3.1kg	3.1kg

• **DAP20-130T: 20W Sound Projector**

The DAP20 is a general, all-purpose loudspeaker which provides excellent music reproduction and clear voice announcements.

IP65-rated, it will effectively operate indoors or outdoors in transport terminals, shopping centres, retail, warehousing and many other applications.

**Features:**

- Weather / ingress resistance (IP65 rated)
- Robust plastic housing
- 100v Power tapplings
- Voice & music capable
- White RAL9010



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

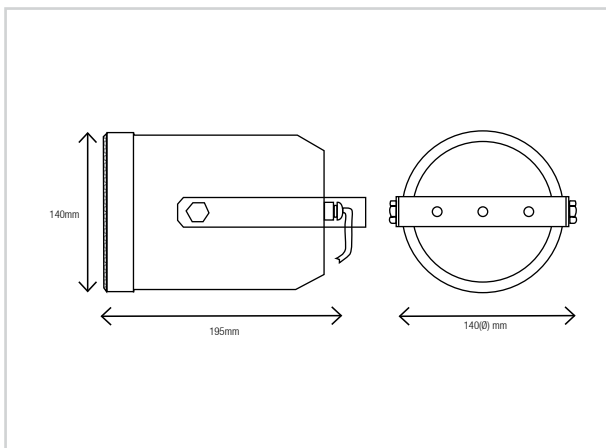
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

Model:	DAP20-130T
100v Power Tappings	2.5, 5, 10, 20W
Frequency Response	150Hz ~ 20KHz
SPL @ 1W/1m	99.5dB
Colour	White RAL9010
Material	ABS
IP Rating	IP65
Dimensions	140(Ø) x 195(D) mm
Weight	1.35kg

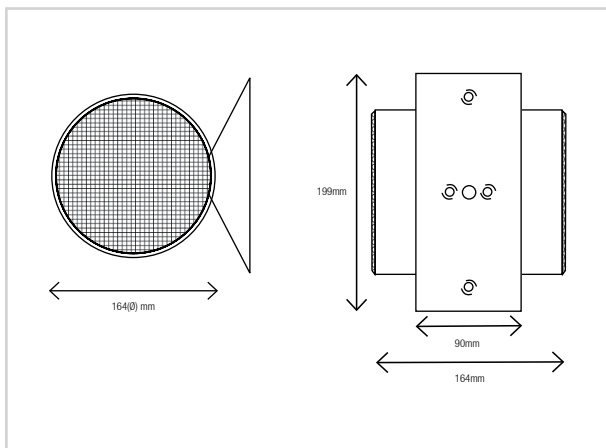
## DA10-260T: 10W Bi-directional Loudspeaker

Ideal for installation in corridors, concourses, transport terminals and plant rooms.

Practical, vandal resistant and incorporating multi-tapping 100v transformer, the DA10 is ideal for voice messages and low level BGM reproduction.

### Features:

- Vandal resistant
- Tough metal housing
- White RAL9010
- 100v Power tapings
- Integral mounting bracket



### Specifications:

Model:	DA10-260T
100v Power Tappings	1.5, 3, 6, 10W
Frequency Response	150Hz ~ 14KHz
SPL @ 1W/1m	90.9dB
Colour	White RAL9010
Material	Metal
Dimensions	164(0) x 164(D) mm Bracket 199(L) x 90(W) mm
Weight	2.2kg

• **CH-522: 20W Music Horn Loudspeaker**

Proofed for outdoor use, the CH-522 can be used in areas where high quality voice and music reproduction are required; for example, distribution centres, production areas and leisure applications.

**Features:**

- Modern design
- Indoor/outdoor mounting
- Full range driver/loudspeaker
- 100v Power tapings
- Universal mounting bracket
- Conforms to IP54



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

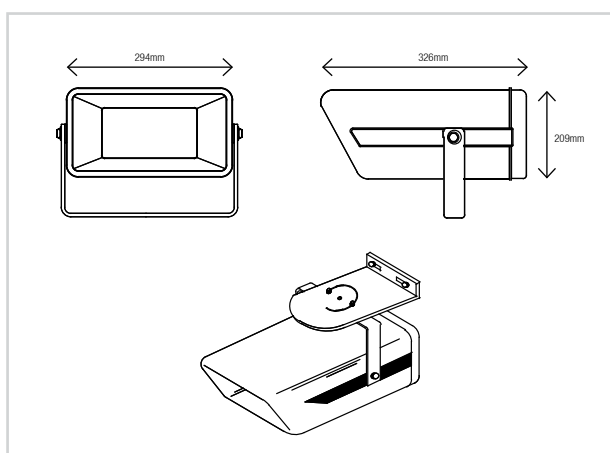
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

<b>Model:</b>	<b>CH-522</b>
100v Power Tappings	10, 20W
Connection	Multicore Cable
Frequency Response	110Hz ~ 20kHz
SPL @ 1W/1m	95dB
Dimensions	294(W) x 209(H) x 326 (D) mm
Weight	3.5kg

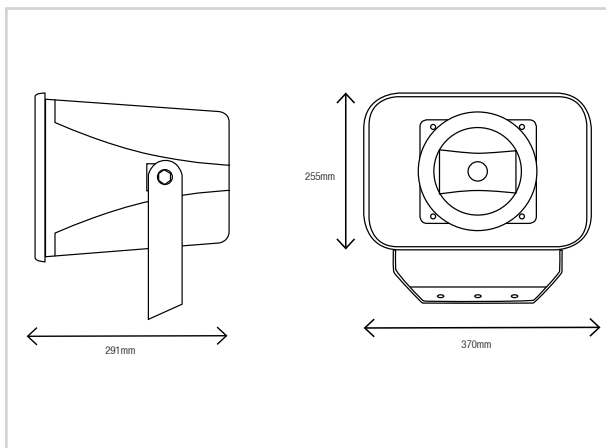
## DK-MH 30/T Plus: 30W Outdoor Music Horn Loudspeaker

For applications which require high quality, high volume background music and paging, such as sports stadiums, race tracks and public venues.

The DK-MH 30/T is IP66-rated so can be mounted outside in the open.

### Features:

- Weather/Ingress resistance (IP66 rated)
- Robust ABS construction
- 100v Power tapplings
- Voice & music compatible
- High SPL
- Aluminum mounting bracket
- RAL 7035 grey



### Specifications:

Model:	DK-MH 30/T Plus
100v Power Tappings	3.75, 7.5, 15, 30W
Frequency Response	80Hz – 14kHz
SPL @ 1W/1m	105.5dB
Colour	Grey RAL7035
Material	ABS
IP Rating	IP66
Dimensions	370(W) x 255(H) x 291(D) mm
Weight	4.3kg



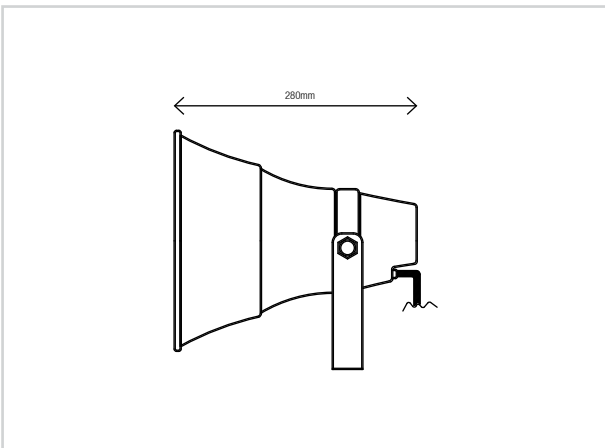
- **HS-20:** 20W Horn Loudspeaker
- **HS-S20:** 20W Horn Loudspeaker

For use in environments where clear, precise voice messages, announcements or emergency tones and signals are required.

The HS-20 and HS-S20 horns can be used in indoor or protected outdoor installations.

**Features:**

- Re-entrant horns
- Metal/ABS construction
- Indoor and protected outdoor use
- 100v Line / Low impedance operation
- Conforms to IP54



**Specifications:**

Model:	HS-20	HS-S20
Power/Taps	10, 20W @100v line, 20W/8Ω	10, 20W @100v line, 20W/8Ω
Connection	Multicore cable	Multicore cable
Frequency Response	380Hz ~ 6.5kHz	380Hz ~ 6.5kHz
SPL @ 1W/1m	106dB	106dB
Dimensions	250(Ø) x 280(D) mm	169(Ø) x 230(D) mm
Weight	2.5kg	1.5kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

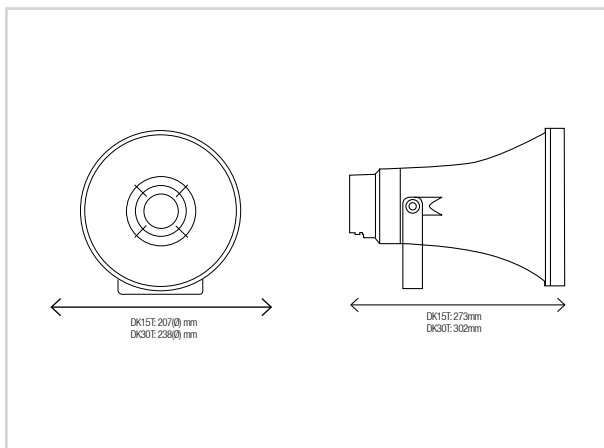
- **DK15T:** 15W Re-entrant Horn Loudspeaker
- **DK30T:** 30W Re-entrant Horn Loudspeaker

The DK Horn Loudspeaker range is ideal for indoor and outdoor applications requiring high intelligibility and clarity in paging, warning and information systems.

IP66 approved, the units offer multi-tapping, 100v line transformer options as well as a Low Z, 20W setting.

#### Features:

- Weather / ingress resistance (IP66 rated)
- Robust ABS material
- Rotary 100v power tapping selector
- 1m cable (glanded)
- High SPL



#### Specifications:

Model:	DK15T	DK30T
100v Power Tappings	1.87, 3.75, 7.5, 15W / 15w@20Ω	5, 10, 20, 30W / 30w@20Ω
Frequency Response	300Hz ~ 12.5kHz	300Hz ~ 6kHz
SPL @ 1W/1m	107dB	110dB
Colour	Grey RAL7035	Grey RAL7035
Material	ABS	ABS
IP Rating	IP66	IP66
Dimensions	207(Ø) x 273(D) mm	238(Ø) x 302(D) mm
Weight	1.9kg	2.6kg

- **AP15T:** 15W Re-entrant Horn Loudspeaker
- **AP30T:** 30W Re-entrant Horn Loudspeaker

Renowned as the leading industry standard paging horn series, AP15T/30T horns are utilised in many applications such as transport terminals, industrial paging, marine, nuclear and warning systems throughout the world.

Robust metal/ABS construction, multi-tapping wattage selection, flexible mounting brackets and full weather resistance for outdoor use completes the package.

**Features:**

- Weather/ingress resistance (IP67-rated when used with the BX range of glands)
- Robust metal/ABS construction
- Screwdriver adjustable Tappings
- High intelligibility
- Optional Gland/Termination - (BX1G for AP30T/BX2G for AP15T - see below)



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

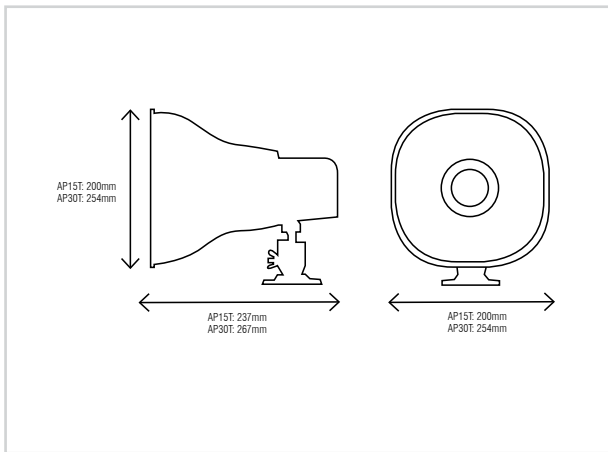
Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



**Specifications:**

Model:	AP15T	AP30T
100v Power Tappings	2, 4, 7.7, 15W	4, 7, 15, 30W
Frequency Response	400Hz ~ 14kHz	300Hz ~ 12kHz
SPL @ 1W/1m	106dB	108dB
Colour	Grey	Grey
Material	Metal	Metal
IP Rating	IP67 (with BX2G)	IP67 (with BX1G)
Dimensions	200(H) x 200(W) x 237(D) mm	254(H) x 254(W) x 267(D) mm
Weight	2.27kg	2.86kg

- **BX1G for 30W Speakers:**  
Optional Waterproof Cable Gland Assembly
- **BX2G for 15W Speakers:**  
Optional Waterproof Cable Gland Assembly

Both the AP15T and AP30T are available with optional waterproof cable gland.



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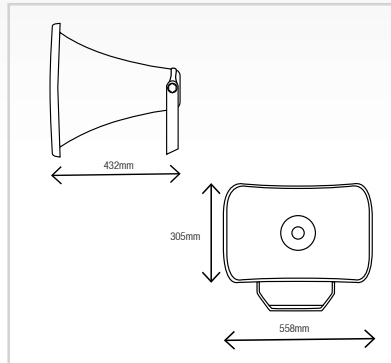
## ● CJ-46: Wide Dispersion Horn/Flare Assembly

Extensively used in stadiums and outdoor events, the CJ46 offers maximum sound penetration in adverse sound conditions.

Units can be mounted individually or grouped / clustered and securely fixed using the heavy duty bracket. Standard 35mm thread allows the fitting of most industry-standard compression drivers (see below for suggested drivers).

### Features:

- Robust glass fibre / metal construction
- Environment resistant for both indoor and outdoor use
- Fully serviceable components
- Operational temperature range of -35° ~ +66°C
- Multi-position mounting bracket



### Specifications:

Model:	CJ-46
Colour	Black
Dispersion	120° x 60°
Dimensions	558(W) x 305(H) x 432(D) mm
Weight	6.58kg

## ● PD30T: 30W Driver

### Specifications:

Model:	CJ46	PD30T**
Maximum Power	(as per driver)	30W RMS
100v Power Tappings	(as per driver)	4, 8, 15, 30W
Frequency Range	(Low Frequency Cut-off 115Hz)	120Hz ~ 14kHz
Maximum SPL (1m at rated power)	N/A	125dB (with CJ-46)
Dispersion	120° X 60°	N/A
Dimensions	584(W) x 380(H) x 432(D) mm	114(W) x 114(H) x 114(D) mm
Weight	7kg	2.1kg

Waterproof Cable Gland Assembly Option: BX1G for 30W Driver (pg 31)



\*When fitted with waterproof gland  
\*\*Specifications when fitted to CJ-46



IP67-rated\* 30 Watt Driver for use with the CJ-46 Projector.

## ic audio

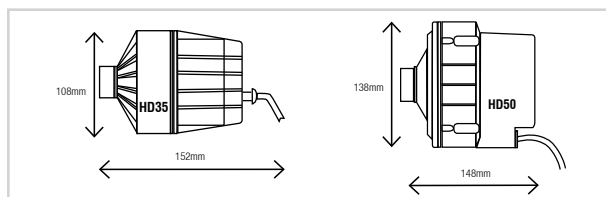
- HD35: 35W Compression Driver Assembly
- HD50: 50W Compression Driver Assembly

Supplied with industry standard 35mm threads, the HD35 and HD50 are compatible with most flares and horns on the market.

Manufactured from cast aluminum and ABS, the units are robust and weatherproof. Multi-tapping 100v transformers and field replaceable voice coils complete the package.

### Features:

- Robust ABS construction
- 100v power tapping options
- Field replaceable voice coils (HDVC35 / HDVC50)



### Specifications:

Model:	HD35	HD50
100v Power Tappings	10, 15, 20, 35W	15, 30, 50W
Frequency Response	510Hz ~ 3.27kHz	319Hz ~ 2.96kHz
SPL @ 1W/1m	113dB	111.5dB
Colour	Grey RAL9007	Grey RAL9007
Material	Aluminium/ABS	Aluminium/ABS
Dimensions	108(Ø) x 152(D) mm	138(Ø) x 148(D) mm
Weight	2.5kg	2.9kg

- **WS203:** 3W Wall Speaker
- **WS210:** 10W Wall Speaker
- **WS230:** 30W Wall Speaker

Inter-M's new-design wall speakers combine discreet styling and simplicity to provide an elegant voice/background music wall speaker for use in offices, waiting rooms, cafeterias, retail sites, etc.

**Features:**

- Modern, discreet styling
- Available in black or white
- Screw terminal connection
- High quality 100v line transformer
- WS203/210 - 6" full range driver
- WS230 - 6" 2-way driver

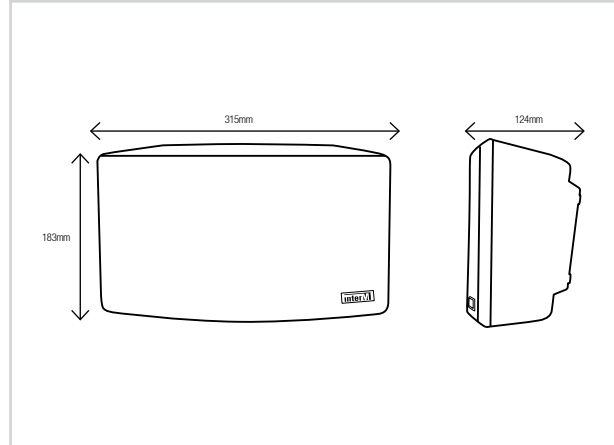


Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools



Microphones (Wired)

Microphones (Wireless)

Portable P.A.

**Specifications:**

Model:	WS203	WS210	WS230
100v Power Tappings	1, 2, 3W	3, 5, 10W	10, 20, 30W
Frequency Response	137Hz ~ 16kHz	136Hz ~ 16kHz	126Hz ~ 16kHz
SPL @ 1W/1m	91dB	92dB	93dB
Dimensions	315(W) x 183(H) x 124(D) mm	315(W) x 183(H) x 124(D) mm	315(W) x 183(H) x 124(D) mm
Weight	1.2kg	1.4kg	2.2kg

Soundfield

## MS-15: 15W Fashion Monitor Loudspeaker

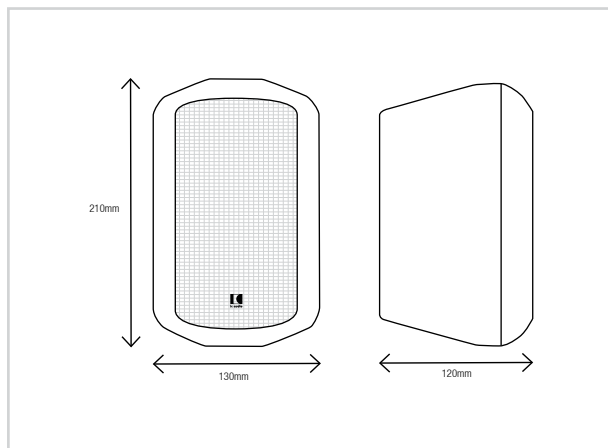
The modern design of the MS-15 makes it ideal for installation in contemporary, modern environments such as bars, pubs, audio visual, conference, education or retail sites and is proofed for use in outdoor or damp environments.

Units are available in black or white and are supplied with a versatile multi-position mounting bracket.

Wattage tapplings are via a multi-way removable Phoenix-type screw terminal block on the rear.

### Features:

- Contemporary design
- Black or white options
- Multi-position mounting bracket
- High quality full-range driver
- Removable 'Phoenix' connection block
- Multi-tapping 100v transformer / LowZ  $8\Omega$
- Weatherproof housing/driver



### Specifications:

Model:	MS-15
100v Power Tappings	3.75, 7.5, 15W
Low Z $8\Omega$	15W
Frequency Response	109Hz ~ 17kHz
SPL @ 1W/1m	99.8dB
Colour Options	White (W) and Black (B)
Material	ABS
Dimensions	130(W) x 210(H) x 120(D) mm
Weight	2kg

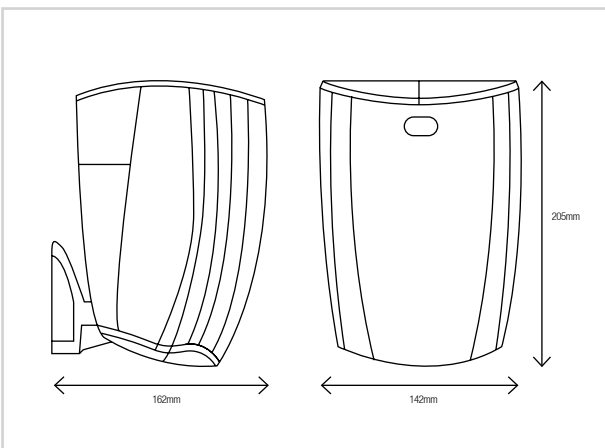
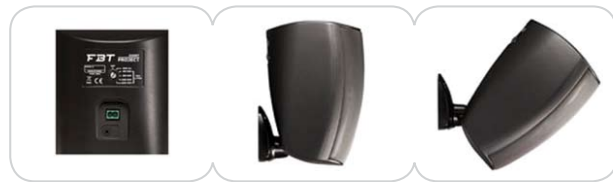
- **PROJECT315BT:**  
15W Black Fashion Speaker
- **PROJECT315WHT:**  
15W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation: their characteristics allow their use in any environment, keeping the same high quality sound.

The Project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

**Features:**

- 2-way Bass reflex systems with 0.5" dome tweeter
- Rated Power @ 8Ω - 30W
- 15W with 100v transformer
- Power tapings via rotary switch
- Complete with adjustable wall mounting bracket
- Safety chain included



**Specifications:**

Model:	PROJECT315BT / PROJECT315WHT
Rated power	1, 2, 4, 7.5, 15 with 100v / 30W @ 8Ω
Frequency Response	100Hz ~ 15kHz
SPL @ 1W/1m	85dB
Maximum SPL 1m	100dB
Dimensions	142(W) x 205(H) x 162(D) mm
Weight	2kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



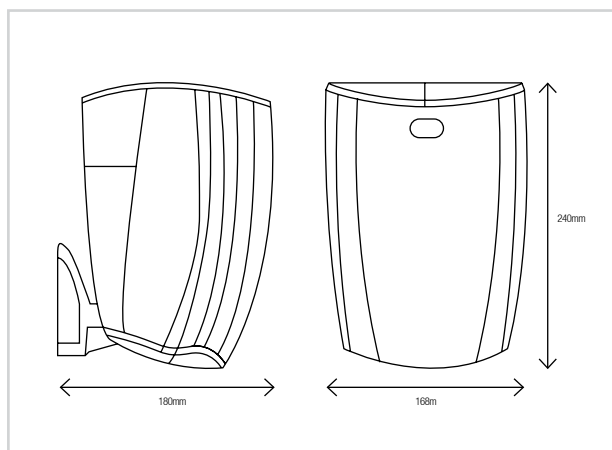
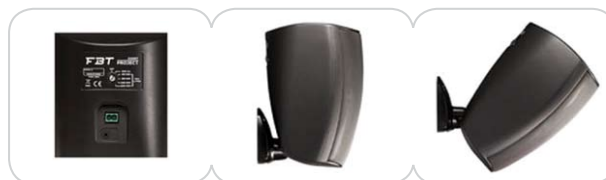
- **PROJECT550BT:**  
50W Black Fashion Speaker
- **PROJECT550WHT:**  
50W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation; their characteristics allow their use in any environment, keeping the same high quality sound.

The Project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

#### Features:

- 2-way Bass reflex systems with 0.5" dome tweeter
- 5" woofer + 1" tweeter
- 50W 100v line / 100W 8Ω output
- ABS housing with metal grille
- Frequency Response: 80Hz ~ 20kHz
- Max. SPL: 109dB
- Dispersion: 100° (H) x 100° (V)
- Fully adjustable die cast mounting bracket (ball joint)
- Supplied with safety wire



#### Specifications:

Model:	PROJECT550BT / PROJECT550WHT
NOM/MAX Power	50W, 100W
Rated power	15, 25, 40, 50W / 100W @ 8Ω
Frequency Response	-10dB, 80Hz ~ 20kHz
SPL @ 1W/1m	89dB
Maximum SPL	109dB
Power requirement	100W/8Ω
Dispersion	100°(H) x 100°(V)
Connectors	Phoenix
Dimensions	168(W) x 240(H) x 180(D) mm
Weight	3.4kg

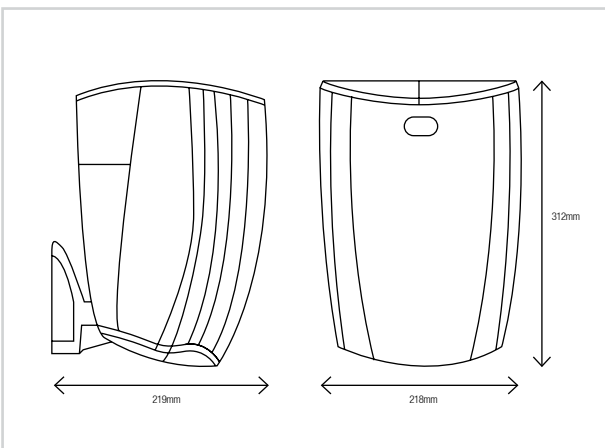
- **PROJECT640BT:**  
40W Black Fashion Speaker
- **PROJECT640WHT:**  
40W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation; their characteristics allow their use in any environment, keeping the same high quality sound.

The project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

**Features:**

- 2-way Bass reflex systems with 0.5" dome tweeter
- 6.5" woofer + 1" tweeter
- 40W 100v line / 80W 8Ω output
- ABS housing with metal grille
- Frequency Response: 70Hz ~ 20kHz
- Max. SPL: 108dB
- Dispersion: 90° (H) x 90° (V)
- Fully adjustable die cast mounting bracket (ball joint)
- Supplied with safety wire



**Specifications:**

Model:	PROJECT640BT / PROJECT640WHT
NOM/MAX Power	40W, 80W
Rated power	10, 20, 30, 40W / 80W @ 8Ω
Frequency Response	-10dB, 70Hz ~ 20kHz
SPL @ 1W/1m	89dB
Maximum SPL	108dB
Power requirement	100v, 8Ω
Dispersion	90°(H) x 90°(V)
Connectors	Phoenix
Dimensions	218(W) x 312(H) x 219(D) mm
Weight	4.6kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

## STUDIO.PRO9 Series: Pro Quality Loudspeaker Cabinets

### Models:

- **STUDIO.PRO 9B:** 120W, Black, Low Impedance, Pro Quality Loudspeaker Cabinet
- **STUDIO.PRO 9W:** 120W, Grey, Low Impedance, Pro Quality Loudspeaker Cabinet
- **STUDIO.PRO9 BT:** 80W, Black, 100v Line, Pro Quality Loudspeaker Cabinet
- **STUDIO.PRO9 WT:** 80W, Grey, 100v Line, Pro Quality Loudspeaker Cabinet
- **STUDIO.PRO9 BA:** 80W + 20W, Black, Pro Quality, Active Loudspeaker Cabinet

Its lightweight construction makes the STUDIO Pro 9 Series the perfect solution for portable or permanent installations in audio visual, presentation or educational applications.

FBT's STUDIO Pro 9 Series music loudspeakers are stylish, extremely lightweight and robust, manufactured in high quality injection moulded polypropylene.

All models feature integral stand adapter, 2 x M6 anchoring points and are available in black or light grey.

### Features:

- 2-way bass reflex system with 130mm woofer and 25mm high frequency tweeter
- 100V line versions tapped at 5, 20, 50, 80W
- Active Loudspeaker versions feature 80W + 20W internal amplifiers. ADAP (Advanced Dynamic Active Protection) designed to limit amplifier saturation and ensure consistent reliability if over driven
- Active versions feature control panel with Ground lift, Combo XLR/Jack inputs, XLR male output, limiter and level control



BS/52-TB  
Adjustable  
floor stand



SJ9UB Wall Mounting  
Brackets: Black / SJ9UW  
Wall Mounting Brackets:  
Grey RAL



SJ9B Adjustable Wall  
support: Black  
SJ9W Adjustable  
Wall support:  
Grey RAL



### Specifications:

Model:	STUDIO.PRO 9B & W	STUDIO.PRO 9BT & WT	STUDIO.PRO 9BA & WA
Colour	Black or Grey	Black or Grey	Black or Grey
Configuration	2-way	2-way	2-way
Recommended amplifier	120W RMS	80W RMS	-
Internal amplifier	-	-	80W + 20W
Long-term applicable power (AES)	60W	-	-
Short-term applicable power (IEC 268-5)	240W	-	-
Rated Impedance	8Ω	-	-
Transformer	-	100v	-
Frequency Response (@-6dB)	80Hz ~ 20kHz	80Hz ~ 20kHz	70Hz ~ 20kHz
Low frequency woofer	1 x 200 38(Ø) mm coil	1 x 200 38(Ø) mm coil	1 x 200 38(Ø) mm coil
High frequency tweeter	1 x Tweeter + horn 20(Ø) mm coil	1 x Tweeter + horn 20(Ø) mm coil	1 x Tweeter + horn 20(Ø) mm coil
SPL @ 1W/1m	95.5dB	95.5dB	95dB
Maximum SPL 1m	116.5dB	114.5dB	115dB
Dispersion	90°(H) x 60°(V)	90°(H) x 60°(V)	90°(H) x 60°(V)
Recommended HP filter	60Hz 24dB oct	60Hz 24dB oct	-
Crossover frequency	3.5kHz	3.5kHz	2.5kHz
Input connectors	Spring terminals	Spring terminals	Combo XLR-M/JACK
Dimensions	255(W) x 415(H) x 245(D) mm	255(W) x 415(H) x 245(D) mm	255(W) x 415(H) x 245(D) mm
Weight	4.8kg	4.8kg	5.4kg

- **STUDIO.PRO 14B:** 250W Performance Loudspeaker Cabinet
- **STUDIO.PRO 14BA:** 150W + 50W, Active, Performance Loudspeaker Cabinet

**Features:**

- Extremely light and sturdy enclosure made of injection moulded polypropylene, black colour, including integral handle
- Stand adapter, 2 M6 anchoring points
- 2-way bass-reflex system with 320mm woofer and 25mm high frequency tweeter
- STUDIO.PRO 14 BA with built-in class G amplifiers, 150W RMS for the woofer and 50W RMS for the high frequency unit; ADAP (Advance Dynamic Active Protection) designed to limit amplifier saturation and ensure complete reliability of the system even in extreme conditions
- **Maximum SPL:**  
**STUDIO.PRO 14 B:** 122/125dB  
**STUDIO.PRO 14 BA:** 121dB
- Dispersion (HxV) 90° x 60°
- 2 speakon input connectors
- **STUDIO.PRO 14 BA:** Control panel with Ground Lift switch, Combo XLR/JACK inputs, XLR male output, limiter, volume control
- **STUDIO.PRO 14 BA:** 24dB/oct active filters



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

**Specifications:**

Model:	STUDIO.PRO 14B/W	STUDIO.PRO 14BA/WA
Colour	Black or Grey (RAL 7035)	Black or Grey (RAL 7035)
Configuration	2-way	2-way
Recommended amplifier	250W RMS	-
Internal amplifier	-	150W+50W RMS
Long-term applicable power (AES)	125W	-
Short-term applicable power (IEC 268-5)	500W	-
Rated Impedance	8Ω	-
Frequency Response (@-6dB)	60Hz ~ 20kHz	60Hz ~ 20kHz
Low frequency woofer	1 x 320 51(Ø)mm coil	1 x 320 51(Ø)mm coil
High frequency tweeter	1 x 25.4 + horn 25.4(Ø)mm coil	1 x 25.4 + horn 25.4(Ø)mm coil
SPL @ 1W/1m	98dB	98dB
Maximum SPL 1m	122, 125dB	121dB
Dispersion	90°(H) x 60°(V)	90°(H) x 60°(V)
Recommended HP filter	40Hz 24dB oct	40Hz 24dB oct
Crossover frequency	2.5kHz	2.5kHz
Input connectors	2 x speakon	2 x speakon
Dimensions	410(W) x 663(H) x 387(D) mm	410(W) x 663(H) x 387(D) mm
Weight	13.5kg	16kg

- **SE8:** 100W Music Cabinet System
- **SE10:** 150W Music Cabinet System
- **SE12:** 250W Music Cabinet System
- **SE15:** 300W Music Cabinet System
- **SB15A:** 450W Sub Bass

The SE Series loudspeaker systems from Inter-M provide both high power and high sensitivity output. The accurate sound reproduction from the SE Series makes them ideal for a wide variety of applications such as houses of worship, night clubs, performing arts facilities, fitness centres, auditoriums and educational establishments for both portable and installed systems.

Trapezoidal in shape, the optimised enclosure design is constructed from high density MDF reducing internal resonance and optimising sound output. Each model is equipped with a heavy duty woofer providing distortion-free low frequency reproduction and 1" titanium diaphragm for smooth extended high frequency response, with in-built protection circuitry preventing the HF unit being overdriven.

The sub bass further enhances the SE Series by providing support for the lower level frequencies required in today's demanding performance environments.

Also included are 35mm top hat pole mounts in the base of each cabinet and multiple embedded M8 fixing points allow the fitting of appropriate bracket work or flying hardware.

#### Features:

- Trapezoidal two-way speaker system
- HF driver protection circuitry
- Titanium compression drivers
- Pole mount top hat and M8 rigging points for suspension / mounting hardware
- Optimised enclosure designed for smooth and extended response
- High quality MDF construction
- Advanced crossover design provides smooth and clear response
- Heavy duty grille
- Robust painted finish (Black)



#### Specifications:

Model:	SE8	SE10	SE12	SE15	SB15A
Rated Power	100W AES, 400W Peak	150W AES, 600W Peak	250W AES, 1000W Peak	300W AES, 1200W Peak	450W AES, 1800W Peak
Type	Ultra-compact, 2-way Passive	Compact, 2-way Passive	Compact, 2-way Passive	Compact, 2-way Passive	Compact, Sub Bass
Frequency Response	65Hz ~ 18KHz	55Hz ~ 18KHz	40Hz ~ 18KHz	38Hz ~ 18KHz	40Hz ~ 300KHz
Drivers	8" LF Driver, 1" HF compression driver	10" LF Driver, 1" HF compression driver	12" LF Driver, 1" HF compression driver	15" LF Driver, 1" HF compression driver	15" LF Driver
SPL @ 1W/1m	93dB	94dB	96dB	97dB	98dB
Maximum SPL	112dB (1m)	114dB (1m)	117dB (1m)	119dB (1m)	124dB (1m)
Nominal Impedance	8Ω	8Ω	8Ω	8Ω	8Ω
Crossover Frequency	2.5kHz	2.3kHz	2.15kHz	2kHz	-
Dispersion (-6dB)	75° horizontal, 60° vertical	75° horizontal, 60° vertical	75° horizontal, 60° vertical	75° horizontal, 60° vertical	-
Connectors	2 x NL4 (SPEAKON)	2 x NL4	2 x NL4	2 x NL4	2 x NL4
Fittings	3 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	1 x mounting pole socket (top)
Dimensions	296(W) x 460(H) x 290(D) mm	362(W) x 545(H) x 355(D) mm	422(W) x 665(H) x 415(D) mm	480(W) x 736(H) x 470(D) mm	470(W) x 636(H) x 540(D) mm
Weight	13kg	17.4kg	22.8kg	32kg	32kg



## Honda Brand Centre

Honda Brand Centre is a £12 million transformation of their former headquarters into a state-of-the-art, modern showroom for their complete range of products. With Armstrong suspended ceilings already specified throughout all UK Honda showrooms, the application of i-ceilings Sound Panels was ideal in achieving fantastic background music and PA results with a loudspeaker solution which would not spoil the clean architectural lines of the interior.



# i ceilings

## SOUND SYSTEMS

### • Ceiling speakers without seeing speakers

i-ceilings 'invisible' integrated Sound Panel loudspeakers from the world leaders in ceiling development.

In providing the ideal environment, the consideration of both acoustics and aesthetics is essential.

i-ceilings, the latest generation of integrated sound panels, uses state-of-the-art NXT technology to provide exceptional sound qualities without spoiling the aesthetic consistency of the ceiling plane.

Combining the innovation of the world's leading designers and suppliers of ceiling systems with the unique sound qualities of NXT technology, Armstrong have produced a unique concept in acoustic ceilings to provide an unparalleled sound system for foreground and background music, voice reinforcement, public address and active acoustics such as sound masking.

#### Features:

- New generation product design
- Completely 'unidentifiable' loudspeaker solution
- Matches over 90% of Armstrong suspended ceiling systems
- Installed up to 75% faster than standard ceiling speakers
- Unparalleled levels of intelligibility and dispersion of sound
- New 'Powered' & 'Surface-mount' versions also available



#### Retail



#### Education





### The concept of i-ceilings

A unique concept in integrated acoustic ceiling systems, i-ceilings utilises NXT flat panel audio technology to provide a loudspeaker system designed to match Armstrong's market-leading range of suspended ceilings.

The i-ceilings concept allows for 'invisible' loudspeaker solutions which benefit from greatly increased sound dispersion, providing incredibly even levels of sound reproduction compared with the 'hot and cold spots' associated with traditional 'cone' loudspeaker technology.

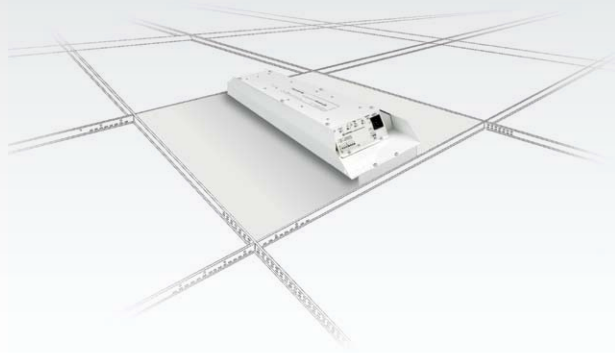
Due to their aesthetic and acoustic qualities, i-ceilings Sound Panels are ideal in education, retail, boardrooms, offices, call centres, healthcare, hospitality and leisure, ensuring even coverage of high quality music and voice reproduction without compromise to the architectural environment.

### The technology

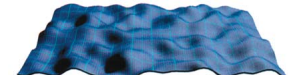
The Armstrong i-ceilings range of Sound Panels utilises the unique loudspeaker technology 'NXT™'. Unlike conventional cone speakers which operate with a piston-like action, NXT technology introduces resonant vibrations to the entire surface of a lightweight flat panel via an electronic transducer system.

In effect, the panel within the ceiling tile is vibrating in much the same way as a piano or acoustic guitar. Like these musical instruments, i-ceilings panels generate highly diffuse and disperse sound energy (similar in nature to the light emitted from a fluorescent lamp).

Sound, therefore, is radiated in all directions to ensure highly intelligible voice and music reproduction and even sound coverage. This is different to the results of a conventional piston-like cone speaker which can cause highly directional and often unintelligible speech in large open spaces.



Uniform sound vibration pattern of a conventional cone speaker



Uncorrelated sound vibration pattern of an NXT Panel

### Corporate



### Leisure



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

## • CS-1000: 8W Sound Panel Ceiling Speakers

CS-1000 Sound Panel with superior combined performance for music, public address and active acoustics to enhance privacy, comfort and workspace effectiveness. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

### Superior Aesthetics:

- Provides improved aesthetics over conventional visible speakers
- Seamlessly blends with the rest of the ceiling

### Flexibility & Value:

- Quick, easy and less expensive to install and/or relocate
- Lays into standard 600 x 600 mm ceiling tile grid\*
- Low profile and location in the ceiling plane reduces plenum conflicts

### Acoustic Features:

- Compatible with 100V line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility over large areas
- Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
- Low transducer self-noise
- Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)

### Material:

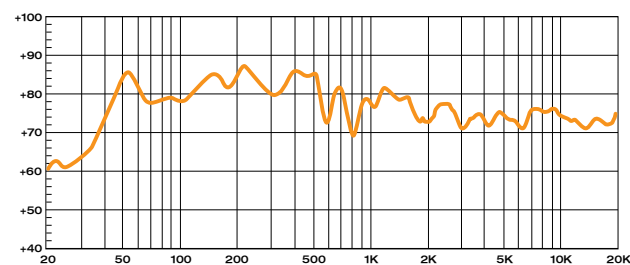
- Steel frame, specially designed tubular membrane, painted scrim facing

### Applications:

- Office
- Retail
- Education
- Leisure
- Healthcare

### Frequency Response:

- Frequency range - nominal
- Armstrong CS-1000 Ultima
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre



\*Also available in all standard European ceiling module sizes



### Finishes:

- i-ceilings CS-1000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075



\*All finish types also available in Orcal 'Clip-in' tile formats.

### Part Numbers:

Part Number:	Product:	Finish:
BP6017ME	CS-1000	Ultima / Optima MicroLook
BP6018ME	CS-1000	Ultima / Optima Tegular
BP6019ME	CS-1000	Dune Plus MicroLook
BP6020ME	CS-1000	Dune Plus Tegular
BP6021ME	CS-1000	Fine Fissured MicroLook
BP6022ME	CS-1000	Fine Fissured Tegular

### Specifications:

Model:	CS-1000
SPL @ 1W/1m	86.9dB / Max 95.9dB
Impedance	100V: 1, 2, 4 & 8W / 8Ω
Transducers	Quantity: 1
Power Capacity	8W
Dimensions	600(W) x 600(L) x 115(D) mm
Panel Weight	4.4kg

## • CS-4000: 8W Sound Panel Ceiling Speakers

The new 4 Transducer CS-4000 Sound Panel provides enhanced output and frequency range performance for AV, public address and active acoustics to enhance privacy, comfort and workspace effectiveness. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

### Superior Aesthetics:

- Provides improved aesthetics over conventional visible speakers
- Seamlessly blends with the rest of the ceiling

### Flexibility & Value:

- Quick, easy and less expensive to install and/or relocate
- Lays into standard 600 x 600 mm ceiling tile grid\*
- Low profile and location in the ceiling plane reduces plenum conflicts

### Acoustic Features:

- 4 Transducer version for higher output levels and wider frequency range
- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility
- Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
- Low transducer self-noise
- Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)

### Material:

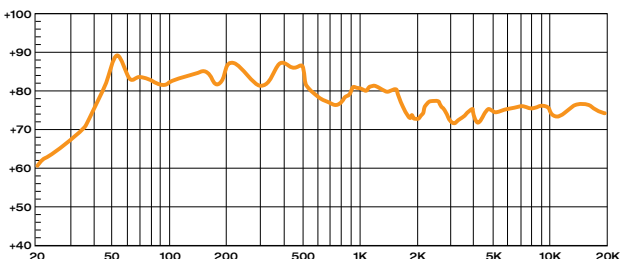
- Steel frame, specially designed tubular membrane, painted scrim facing

### Applications:

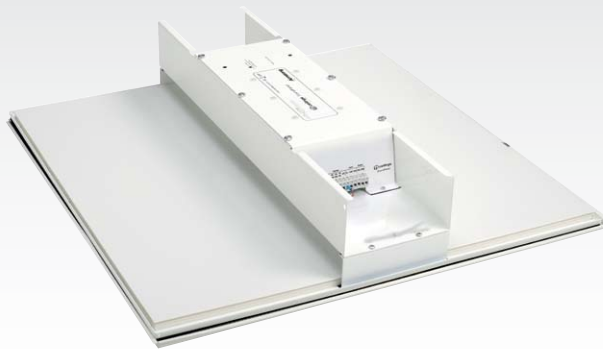
- Office
- Retail
- Education
- Leisure
- Healthcare

### Frequency Response:

- Frequency range - nominal
- Armstrong CS-4000 Ultima
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre



\*Also available in all standard European ceiling module sizes



### Finishes:

- i-ceilings CS-4000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075



\*All finish types also available in Orcal 'Clip-in' tile formats.

### Part Numbers:

Part Number:	Product:	Finish:
BP4017ME	CS-4000	Ultima / Optima MicroLook
BP4018ME	CS-4000	Ultima / Optima Tegular
BP4019ME	CS-4000	Dune Plus MicroLook
BP4020ME	CS-4000	Dune Plus Tegular
BP4021ME	CS-4000	Fine Fissured MicroLook
BP4022ME	CS-4000	Fine Fissured Tegular

### Specifications:

Model:	CS-4000
SPL @ 1W/1m	88.9dB / Max 97.4dB
Impedance	100v: 1, 2, 4, 8W / 8Ω
Transducers	Quantity: 4
Power Capacity	8W
Dimensions	600(W) x 600(L) x 115(D) mm
Panel Weight	4.6kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

## • Pro-Series: 30W Sound Panel Ceiling Speakers

Pro Series Sound Panel with superior combined performance for music and audio visual applications. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

### Superior Aesthetics:

- Provides improved aesthetics over conventional visible speakers
- Seamlessly blends with the rest of the ceiling

### Flexibility & Value:

- Quick, easy and less expensive to install and/or relocate
- Lays into standard 600 x 600 mm ceiling tile grid\*
- Low profile and location in the ceiling plane reduces plenum conflicts

### Acoustic Features:

- Superior dispersion of sound over the full audible range
- Advanced membrane design produces high fidelity music for foreground and background applications
- Superior audio capabilities provide high quality active acoustics
- High power capacity generates high performance sound
- 'In' & 'out' terminals for both 100v and 8Ω
- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility over large areas
- Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
- Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)

### Material:

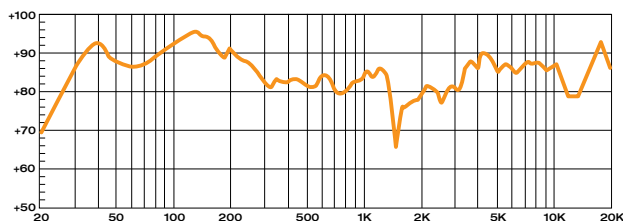
- Steel frame, special honeycomb membrane, painted scrim facing

### Applications:

- Office
- Retail
- Education
- Leisure
- Healthcare

### Frequency Response:

- Frequency range - nominal
- Armstrong Pro Panel Ultima
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre



\*Also available in all standard European ceiling module sizes



### Finishes:

- i-ceilings CS-1000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075



\*All finish types also available in Orcal 'Clip-in' tile formats.

### Part Numbers:

Part Number:	Product:	Finish:
BP6013ME	Pro Series	Ultima / Optima MicroLook
BP6014ME	Pro Series	Ultima / Optima Tegular
BP6015ME	Pro Series	Dune Plus MicroLook
BP6016ME	Pro Series	Dune Plus Tegular
BP6030ME	Pro Series	Fine Fissured MicroLook
BP6031ME	Pro Series	Fine Fissured Tegular

### Specifications:

Model:	PRO Panel
SPL @ 1W/1m	93dB
Impedance	100v: 7.5, 15, 30W / 8Ω
Transducers	Quantity: 4
Power Capacity	30W
Dimensions	600(W) x 600(L) x 120(D) mm
Panel Weight	5.5kg

- **CS-4000/PwrD:** 8W i-ceilings Powered Sound Panel Ceiling Speakers
- **PRO/PwrD:** 20W i-ceilings Powered Sound Panel Ceiling Speakers

i-ceilings CS-4000 and Pro Panels are now also available as powered versions, featuring our exclusively developed Integrated Panel Amplifier.

The 20W Panel Amplifier is factory-fitted and features line level volume control, tone controls and external speaker output.

All connections to the amplifier are externally accessible using removable screw terminals for fast and easy connection.

**Acoustic Features:**

- 20W Integrated Amplifier (30W Peak)
- Line Level Volume Control
- Low, Mid and High Tone Controls
- Available in self-powered CS-4000 and Pro Panel versions
- Powered Panel versions will power an additional passive CS4000 Sound Panel slave
- Fast and easy to install

**Applications:**

- AV Presentation Systems
- Education
- Healthcare
- Leisure
- Corporate

**Material:**

- Steel frame and bridge



Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

**Part Numbers:**

Part Number:	Product:	Finish:
BP4017ME/PwrD	CS-4000/PwrD	Ultima / Optima MicroLook
BP4018ME/PwrD	CS-4000/PwrD	Ultima / Optima Tegular
BP4019ME/PwrD	CS-4000/PwrD	Dune Plus MicroLook
BP4020ME/PwrD	CS-4000/PwrD	Dune Plus Tegular
BP4021ME/PwrD	CS-4000/PwrD	Fine Fissured MicroLook
BP4022ME/PwrD	CS-4000/PwrD	Fine Fissured Tegular
BP6013ME/PwrD	Pro Series/PwrD	Ultima / Optima MicroLook
BP6014ME/PwrD	Pro Series/PwrD	Ultima / Optima Tegular
BP6015ME/PwrD	Pro Series/PwrD	Dune Plus MicroLook
BP6016ME/PwrD	Pro Series/PwrD	Dune Plus Tegular
BP6030ME/PwrD	Pro Series/PwrD	Fine Fissured MicroLook
BP6031ME/PwrD	Pro Series/PwrD	Fine Fissured Tegular

**Specifications:**

Model:	CS-4000/PwrD	PRO/PwrD
Frequency Range	80Hz ~ 18kHz	40Hz ~ 20kHz
Output Impedance	8Ω	8Ω
Output Power	8W RMS (max)	20W RMS (max)
Operating Voltage	230v AC	230v AC
SPL @ 1W/1m	88.9dB / 97.4dB Max	93dB 1m
Extension Speaker Output	8W	8W
Dimensions:	600(W) x 600(D) x 120(H) mm	600(W) x 600(D) x 120(H) mm
Panel Weight:	6.2kg per panel	7.1kg per panel

- **RVC1:** Remote Volume Control

RVC1 Wall-mounting remote volume control is available as an additional option.



## • CS4500ME: 8W Surface-mount Sound Panel Ceiling Speaker

The new CS4500 Sound Panel has been developed to provide all the acoustic benefits of an i-ceilings NXT loudspeaker, in environments featuring solid/plasterboard ceilings (ie. no suspended ceiling system available for installing standard i-ceilings Sound Panels).

This surface-mount solution features an i-ceilings CS Sound Panel fitted within a low-profile, steel 'back box' for direct mounting to a solid ceiling.

### Acoustic Features:

- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility over large areas
- Delivers music, public address and active acoustics through the same speaker
- Variable wattage tap for localised volume control (internal screw terminals)

### Applications:

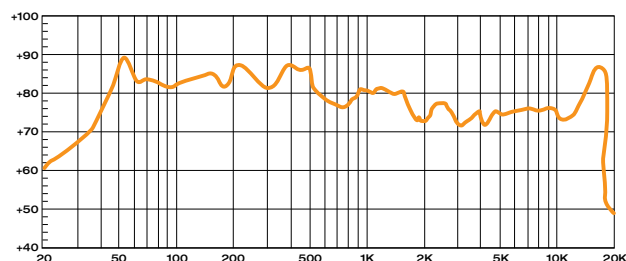
- Office
- Education
- Healthcare
- Retail
- Leisure

### Material:

- White, steel enclosure, specially designed membrane, white scrim facing

### Frequency Response:

- Frequency range - nominal
- Armstrong CS4500
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre



Back-box rear elevation

### Specifications:

Model:	CS4500ME
SPL @ 1W/1m	88.9dB / Max 97.4dB
Frequency Range	50Hz - 18kHz
Impedance	100v: 1, 2, 4 & 8W / 8Ω
Transducers	Quantity: 4
Power Capacity	8W
Dimensions	500(W) x 500(L) x 70(D) mm
Panel Weight	4.3kg

### Part Numbers:

Part Number:	Product:	Finish:
BP4500ME	CS4500ME	WHITE TEXTURED FINISH

Please Note: The CS4500 Sound Panel is not appropriate for wallmount applications



- **AIW1X:** 20W Plastered In-Wall Loudspeaker
- **AIW3X:** 40W Plastered In-Wall Loudspeaker
- **AIW5X:** 80W Plastered In-Wall Loudspeaker

The advent of high power vibrational element flat panel loudspeakers has given birth to the truly unseen loudspeaker.

This plastered in-wall (or in-ceiling) product type reproduces high definition sound with zero visual interference to room aesthetics. Entertainment systems can now be employed in every room of the home, whilst avoiding all the usual techno clutter.

This technology has the additional advantage of improving dispersion characteristics over a conventional loudspeaker, making speaker location and listening position much more flexible.

The width of an AIW product allows it to fit well within the centre spacing commonly used in modern wood or metal studwork construction methods (400mm space).

**Applications:**

- The **AIW1X** is an affordable, concealed sound source for use in all parts of the home where more modest sound levels are called for. From bedrooms and bathrooms to kitchens and hallways, it reproduces high quality audio without compromising style or design.
- The **AIW3X** is for use in all parts of the home including the main listening areas of home cinema, where good high levels of sound are required.
- The **AIW5X** can be reserved for those special areas of the home (e.g. home cinema rooms) where very loud, highly dynamic, high performance reproduction is required. In home cinema and other extended frequency range listening applications the addition of a sub woofer to your system is recommended. For those with monster taste in music or movie loudness, simply apply more than one AIW5 per channel.



**Specifications:**

Product:	AIW1X	AIW3X	AIW5X
Nominal Impedance	8Ω	8Ω	8Ω
Power Handling: (continuous)	20W	40W	80W
Sensitivity (with 1.5mm plaster skin) @ 1W/1m	82dB	85dB	88dB
Maximum SPL (with 1.5mm plaster skin)	95dB 1m/20W	99dB 1m/40W	105dB 1m/80W
Frequency Range	100Hz ~ 20kHz	100Hz ~ 20kHz	100Hz ~ 20kHz
Electrical Connection	Butt splice crimp or 2 part polarised connector	Butt splice crimp or 2 part polarised connector	Butt splice crimp or 2 part polarised connector
Minimum Aperture Depth	60mm from front of panel	60mm from front of panel	60mm from front of panel
Fixings Provided	Suitable for 12.5 and 16mm thick plasterboard	Suitable for 12.5 and 16mm thick plasterboard	Suitable for 12.5 and 16mm thick plasterboard
Box Quantity	Pairs	Pairs	Pairs
High Pass Filter Requirement	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)
Dimensions	450(W) x 345(H) x 38(D) mm	450(W) x 345(H) x 38(D) mm	450(W) x 345(H) x 38(D) mm
Weight	1kg	1.13kg	1.76kg

For the very best results, your system electronics should also comprise in-line equalisation to compensate for slight variations in frequency response due to plaster depths and wall types

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops



# InformaCast

by  **singlewire**<sup>SM</sup>  
software

## InformaCast IP: Broadcasting & Loudspeaker Systems

Easily connect loudspeaker systems to existing computer networks with IP Speakers. Atlas Sound IP Speakers are a Power-over-Ethernet (PoE) loudspeaker range which require only a RJ-45 connector to connect to existing data networks.

The perfect choice for education, military/government, and large scale corporate applications, InformaCast IP Broadcasting Solution revolutionises communication, clock/bell and message playback functionality.

It provides the capability to simultaneously send a multicast audio stream and text messages to any combination of Cisco IP phones, Atlas Sound IP Speakers and PCs.

With the push of a single button on the phone or a single click from a PC, a user can send a live, recorded, or scheduled broadcast to one or more paging groups.

With InformaCast-compliant loudspeaker products from Atlas Sound, system designers and integrators will have the ability to deploy extremely large scale and complex paging systems over new or existing Cisco networks with the convenience of centralized administration by IT personnel.

### Features of Atlas Sound IP Loudspeakers:

- Line out and amplified out
- Multicast support
- Minimal delay
- Easy to install - built-in test tones allow quick check of installation
- Can work with traditional high voltage wiring
- Available in several different configurations
- Inter-operates with Cisco VoIP networks and phones and with Singlewire InformaCast Broadcasting application
- Web (HTTP) interface for status and control
- Software can be automatically upgraded for future needs

### Options:

- A wireless network connection (802.11)
- PoE and non-PoE
- Synchronized clock display
- Several different speaker configurations:
  - Horns
  - Weatherproof
  - Ceiling Panels
  - Wall Panels
  - Vandal proof

