

## Product Description

The iw6 TDC is a full bandwidth in wall speaker system, using a 165mm (6.50") Tannoy Dual Concentric™ point source, constant directivity drive unit with an additional 25mm (1.00") Tannoy SuperTweeter™. Designed primarily for installation into standard stud partition wall systems, it may also be used in cavity wall installations constructed with standard thickness drywall as well as a wide range of other wall construction types with a surface thickness of up to 25mm (1.00").

High power handling and 91dB efficiency ensure this compact unit is ideally suited to applications requiring the combination of premium sonic quality for music and speech reinforcement and exceptional reliability and intelligibility.

The 165mm (6.50") Tannoy Dual Concentric™ drive unit comprises a multi fibre paper pulp mid bass cone and a 25mm (1.00") ferrofluid cooled, titanium dome HF unit with neodymium magnet system. The mid-bass and tweeter sections of this constant directivity driver are coincidentally aligned to a true point source; ensuring a wide and controlled dispersion for optimum coverage; this while avoiding the massive loss of energy, in the vertical plane at the crossover frequency, inherent in two-way discrete designs.

The addition of a 25mm (1.00") titanium dome SuperTweeter™ extends the frequency bandwidth out to over 50kHz, further enhancing the already class leading, low distortion performance of the iw6 TDC with an exceptionally natural and open soundstage. The iw6 TDC is also equipped with dynamic high frequency protection.

The drivers and passive frequency dividing network are mounted in an injection moulded, paintable front baffle manufactured from UV/weather resistant UL94V-0 ABS material. The class leading performance is further enhanced by the inclusion of six self aligning, spring loaded clamps; allowing for quick install but also for simple removal or reorientation of the loudspeaker. The rigidity of the clamps and baffle combination crucially provides the acoustically optimum bond to the wall surface without risk of distortion to the baffle itself. Gold plated spring loaded terminals are provided for ease of installation and a steel back can is available as an optional installation accessory.

Complementing any style of decor, the perforated metal grille and discreet moulded baffle can be painted to blend seamlessly with any environment.

## Features

- Extended frequency response and very low distortion
- Wide, controlled constant directivity dispersion for optimum coverage
- Does not suffer from massive loss of energy in the vertical plane at crossover caused by two way discrete designs
- UV/weather resistant UL94V-0 ABS construction for structural integrity
- Dynamic high frequency protection
- Six way self-aligning mounting system
- Ferrofluid cooled neodymium high frequency driver
- Five year warranty

## Applications

- Foreground music and paging systems
- Multi-room audio systems
- Home theatre
- Business music systems
- Boardrooms and offices
- Retail environments
- Retail outlets and shopping malls
- Lounges and bars
- Cruise ships
- Courtrooms

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## TECHNICAL SPECIFICATIONS

System	iw6 TDC	
Frequency Response (-3dB) <sup>(1)</sup>	75Hz - 51kHz	
Frequency Range (-10dB) <sup>(1)</sup>	36Hz - 54kHz	
System Sensitivity (1W @1m) <sup>(2)</sup>	91dB (1W - 2.83V for 8 Ohms)	
Nominal Coverage Angle	90 degrees conical	
Coverage Angle (1kHz to 6kHz)	110 degree conical	
Directivity Factor (Q)	5.6 averaged 1kHz to 6kHz	
Directivity Index (DI)	6.5 averaged 1kHz to 6kHz	
Rated Maximum SPL <sup>(3)</sup>		
Average	110.5dB	
Average	109dB (with optional THP60 transformer)	
Peak	116.5dB	
Power Handling		
Average	90W	
Programme	180W	
Peak	360W	
Recommended Amplifier Power	180W @ 8 Ohms	
Nominal Impedance	8 Ohms	
Distortion		
10% Full Power (5.5V)	2nd Harmonic	3rd Harmonic
250Hz	2.00%	0.12%
1kHz	0.33%	0.68%
10kHz	0.67%	0.21%
1% Full Power (1.73V)	2nd Harmonic	3rd Harmonic
250Hz	0.57%	0.14%
1kHz	0.08%	0.28%
10kHz	0.27%	0.3%
Crossover	1.8Hz, 16Hz	

### Notes:

- (1) Average over stated bandwidth. Measured at 1 metre on axis.  
 (2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber

A full range of measurements, performance data, CLF and Ease™ Data can be downloaded from [www.tannoy.com](http://www.tannoy.com)

Full independent verification of published specifications carried out by NWA Labs, California can also be obtained from the downloads section of [www.tannoy.com](http://www.tannoy.com)

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods will always equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

### Transducers

Dual Concentric™	Point source, constant directivity driver
Low Frequency	1 x 165mm (6.50")
High Frequency	19mm (0.75") titanium dome with neodymium magnet system
Supertweeter™	19mm (0.75") titanium dome with neodymium magnet system

### Physical

Construction	Baffle UL 94V-0 rated ABS Grille Steel, with weather resistant coating Back can Zinc plated steel (optional accessory)
Clamping Design	Six way, self aligning security toggle clamp system
Connectors	Gold plated connectors with spring terminals
Hole Cutout Size	271.50 x 168.50mm (10.70 x 6.63") Maximum wall thickness - 25mm (1.00")
Dimensions	
Front baffle	320 x 209 x 104mm (12.60 x 8.23") (H x W)
Front of baffle to rear of magnet assembly	104mm (4.10")
Front of wall to rear of magnet assembly	99mm (3.90")
Net Weight	3kg (6lbs 6oz)
Included Accessories	Paint mask, cutout template, grille
Optional Accessories	Steel back can Steel back can with THP60 transformer Plaster (mud) ring
Transformer Taps (optional)	
70V	60W / 30W / 15W / 7.5W / OFF & Low Impedence operation
100V	60W / 30W / 15W / OFF & Low Impedence operation

### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8000 3770	iw62 TDC	White	1

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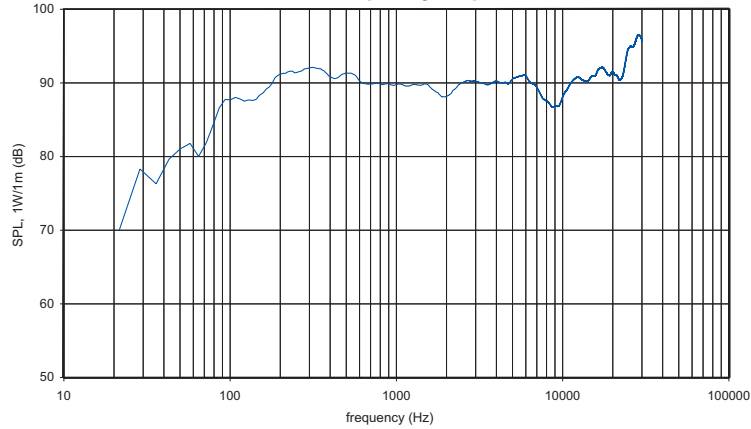
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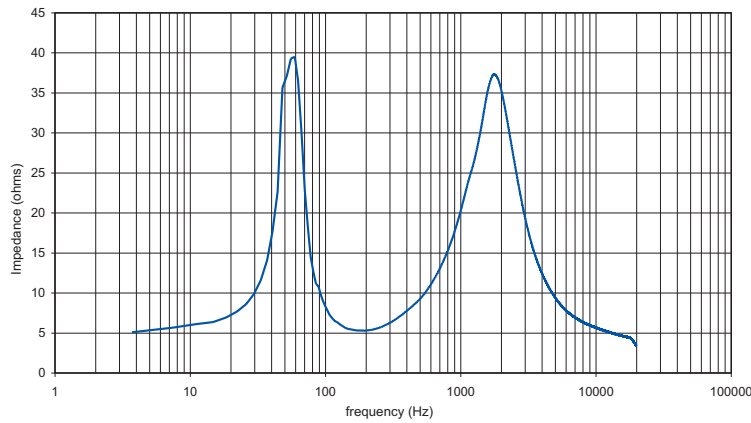
## PERFORMANCE MEASUREMENTS

1m on-axis frequency response



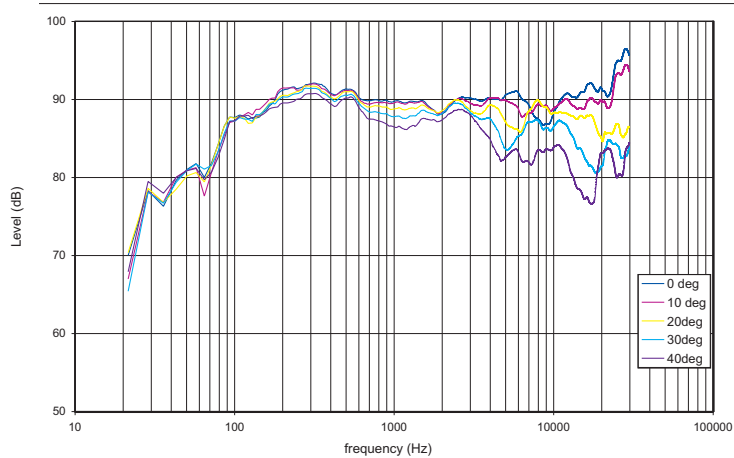
ANECHOIC  
FREQUENCY  
RESPONSE

Impedance vs frequency



IMPEDANCE

Horizontal off-axis response



OFF AXIS  
RESPONSE

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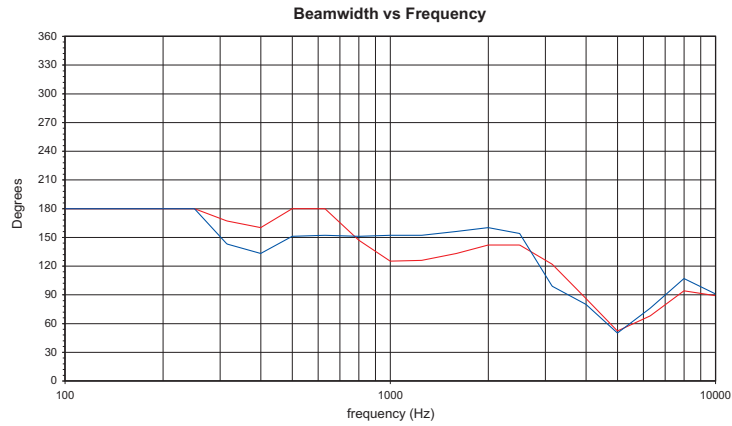
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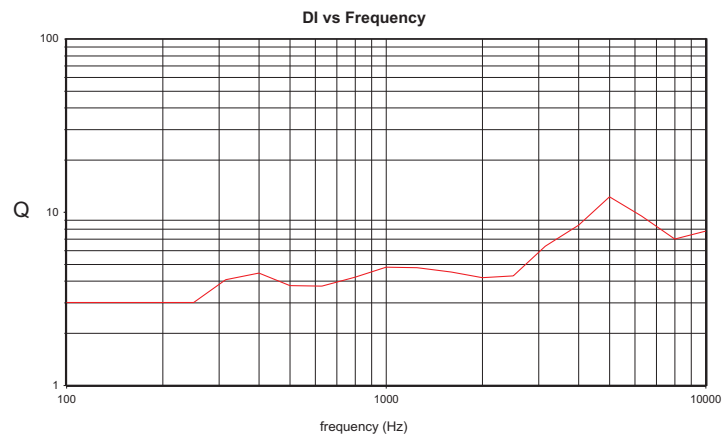
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## PERFORMANCE MEASUREMENTS



BEAMWIDTH



DIRECTIVITY INDEX

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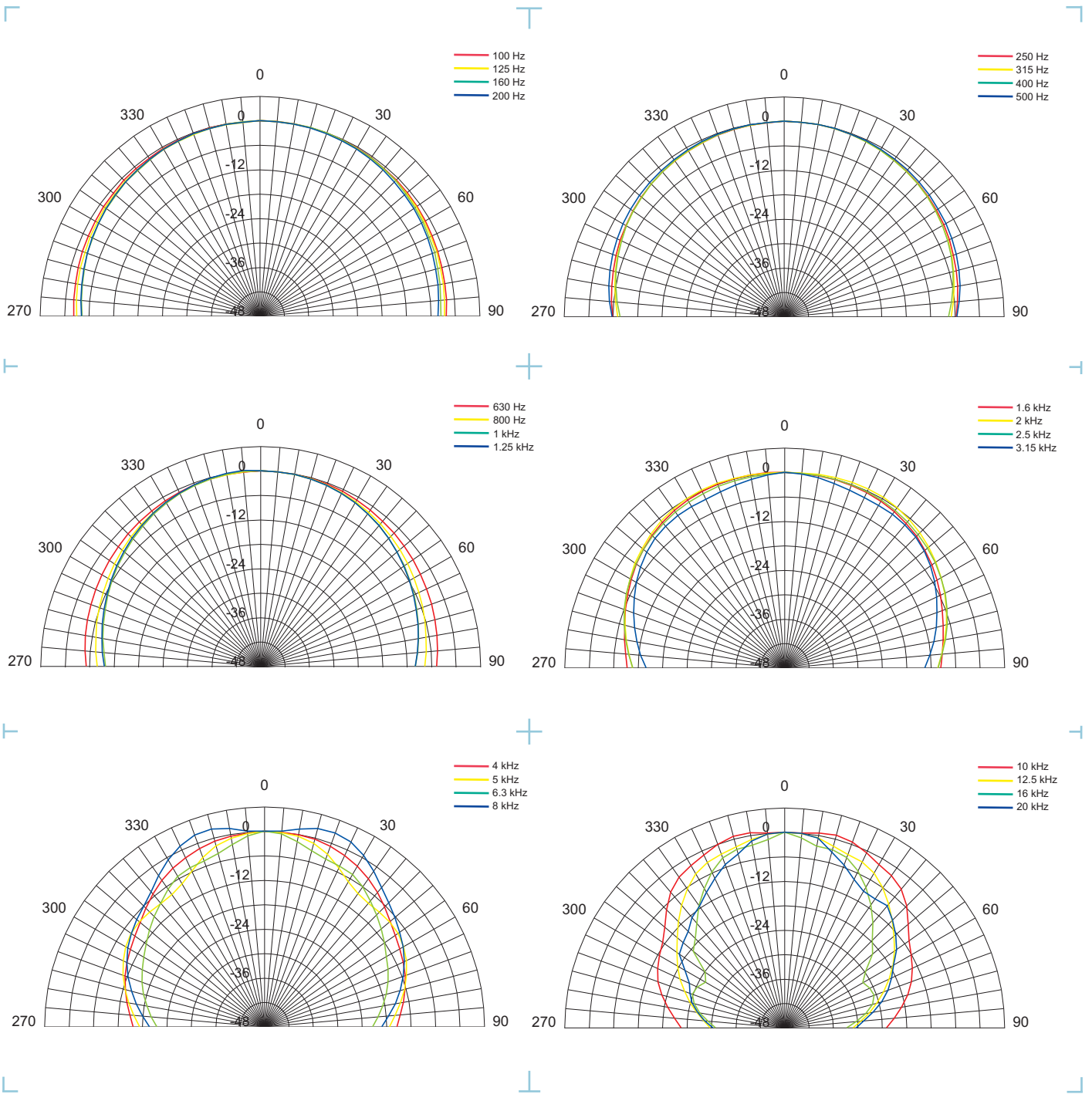
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## PERFORMANCE MEASUREMENTS POLAR PLOTS (1/3 OCTAVE)



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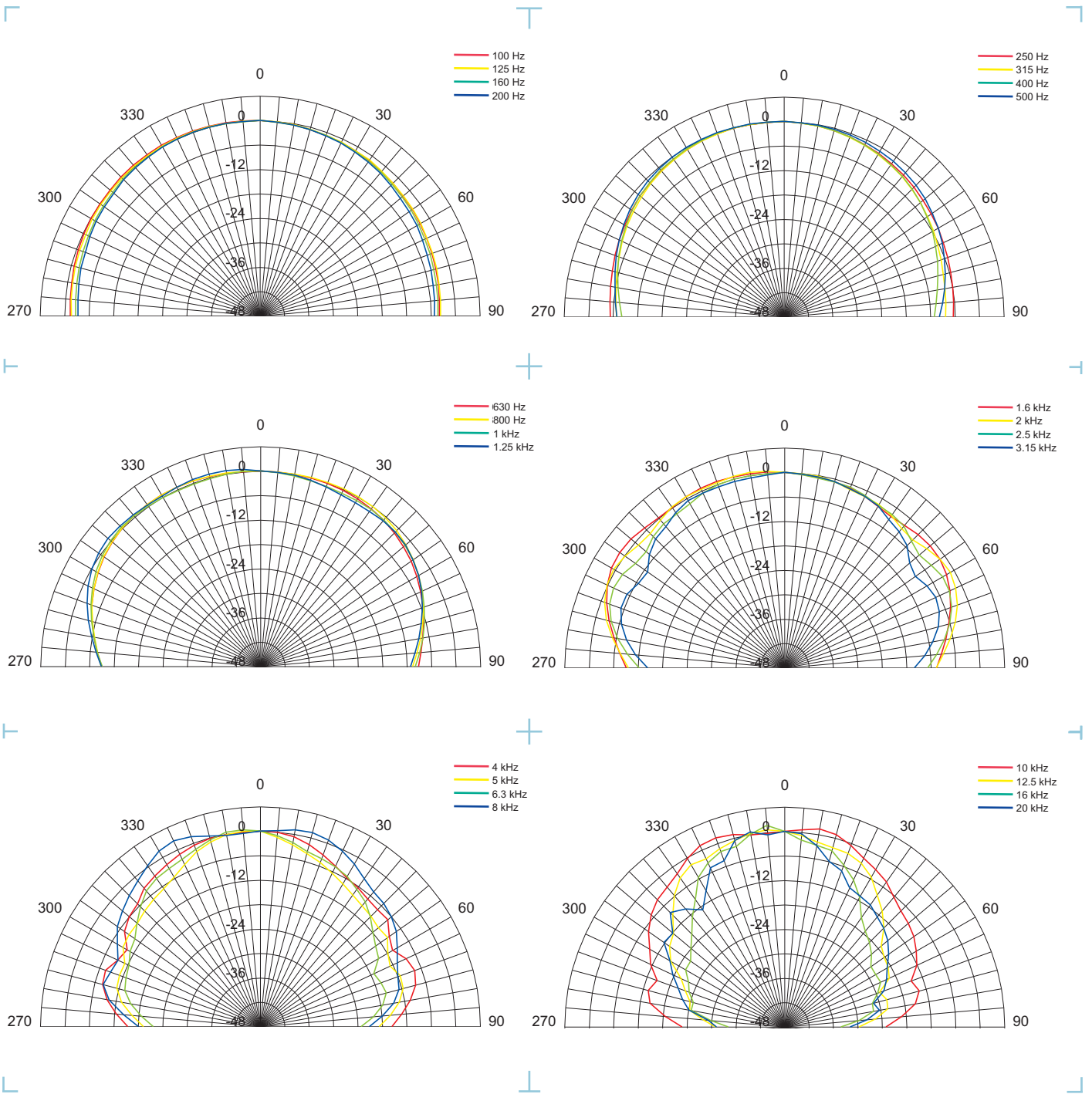
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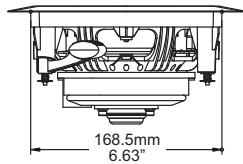
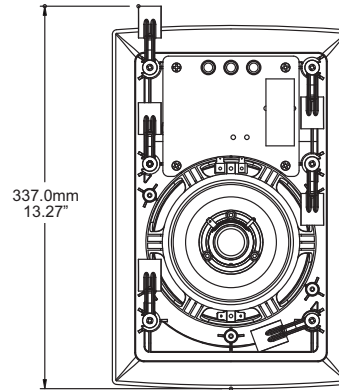
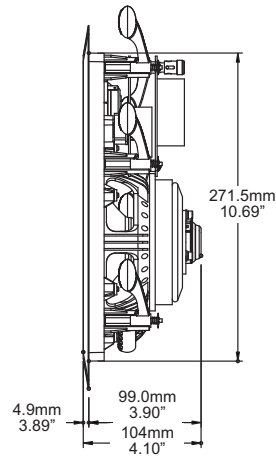
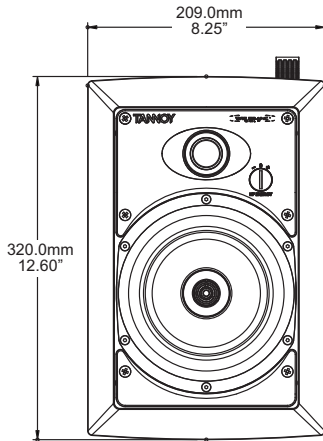
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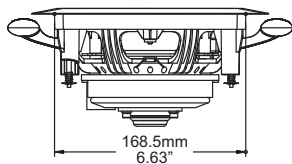
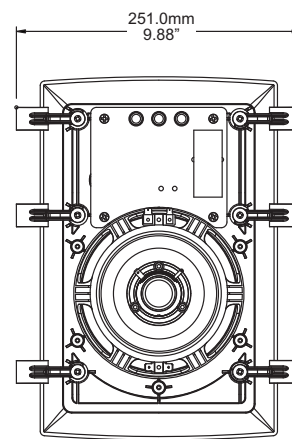
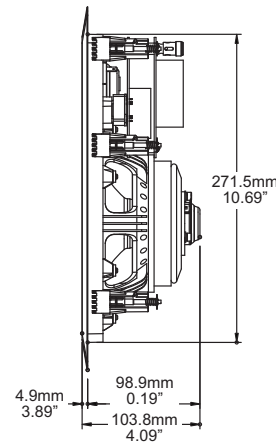
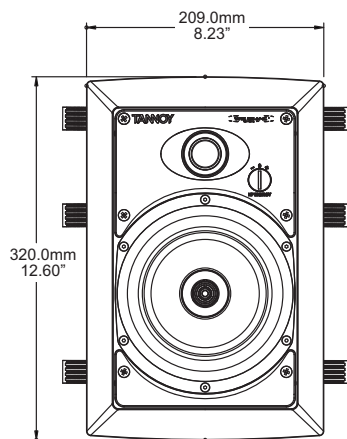
# iw6 TDC

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## DIMENSIONAL SKETCHES



### iw6 TDC - PRE-INSTALLATION



### iw6 TDC - POST-INSTALLATION

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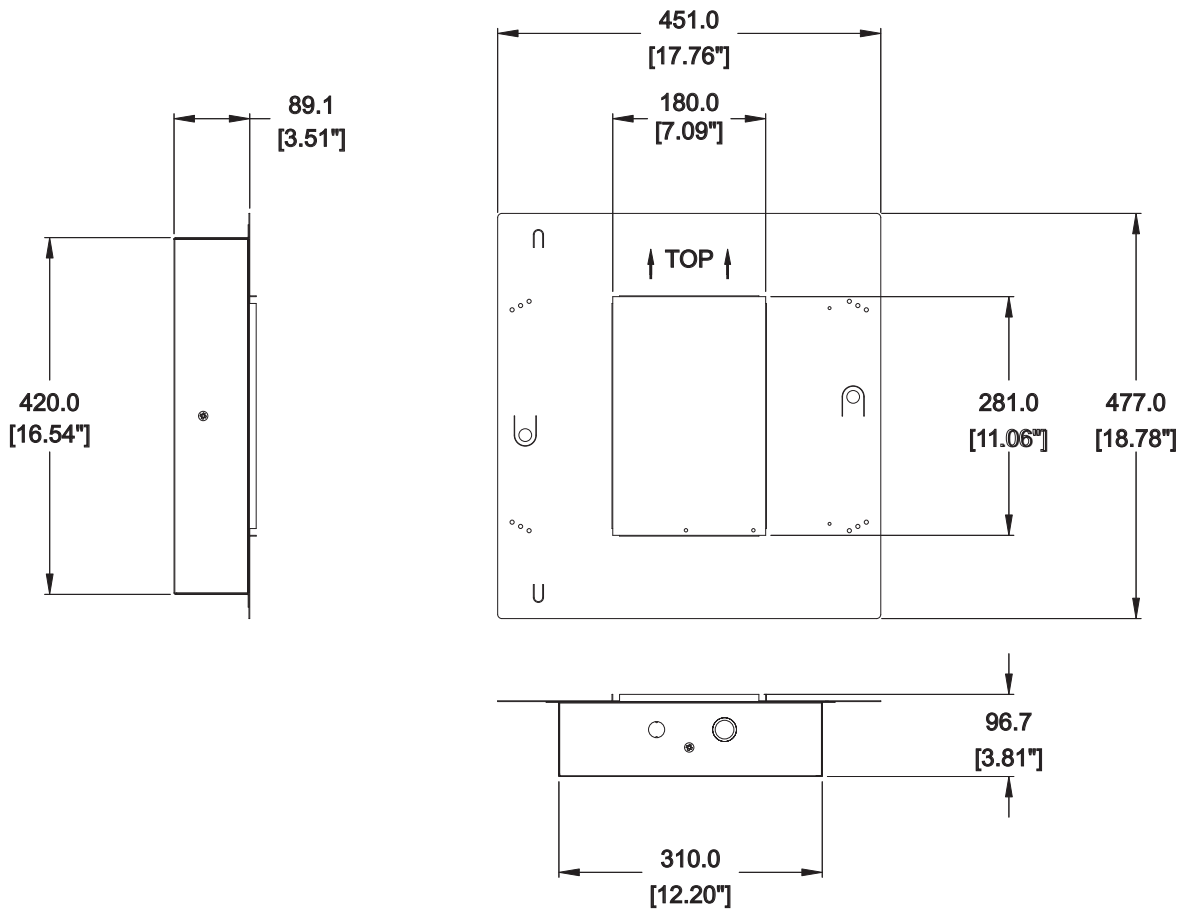
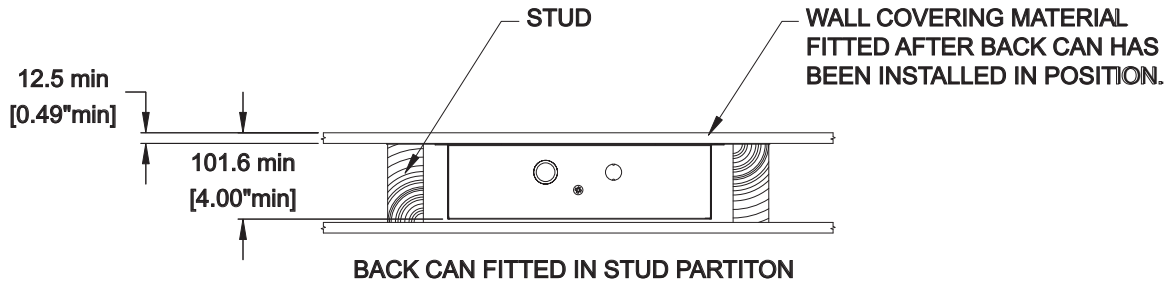
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**INWALL BACK CAN ACCESSORY**



**Ordering Information**

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY	PACKED WEIGHT
8000 4020	iw6 TDC/DS Back Can	Unpainted Steel	1	4.00Kgs (8.80lbs)
8000 4230	iw6 TDC/DS Transformer Back Can	Unpainted Steel	1	11.00Kgs (23.1lbs)
8000 4250	Pre-install mounting ring for iw6 TDC/TS	-	-	-





## Architectural specifications

The in wall speaker shall consist of one 165mm (6.50") Dual Concentric™ transducer and one 25mm (1.00") Supertweter™ mounted in an injection moulded front baffle manufactured from UV/weather resistant UL94V-0 ABS material. The three-way system shall incorporate an optimised low loss crossover network. The wiring terminals shall be gold plated spring loaded connectors. Performance of the in wall speaker shall meet or exceed the following criteria: The system shall have a coverage angle of 110 degrees (1kHz to 6kHz). Frequency response measured on axis shall be 36Hz - 54kHz (-10dB from rated sensitivity, measured in an IEC baffle in an anechoic chamber) with no equalization. Sensitivity shall be 91dB (1W @ 1m). Long term power handling capacity as defined in EIA-426B test shall be 90W, recommended amplifier power 180W @ 8 Ohms. The nominal system impedance shall be 8 Ohms.

In 70V or 100V distributed audio systems the iw6 TDC can be used with the optional the THP60 high performance, low insertion loss transformer with 60, 30, 15 and 7.5W taps\* available.

A weather resistant perforated steel grille covers the transducer. Both the grille and baffle shall be paintable. The system shall not exceed the following dimensions: 320 x 209 x 104mm or 12.60 x 8.23 x 4.10" (H x W x D). Hole cutout size shall be 271.50 x 168.50mm or 10.71 x 6.63".

The in wall speaker system shall be the.....iw6 TDC.

\*70.7 Volt only

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