

# **ST-200**

## ***Prestige SuperTweeter***

**Please take time to carefully read this manual before installing and using your  
Tannoy SuperTweeter**

# **TANNOY®**

## *The ST-200 Prestige SuperTweeter*

Congratulations on choosing this precision hand-crafted component, to complement your Tannoy Dual Concentric loudspeaker system. Before removing from the flight case and installing, please take the time to read these instructions, in order to prevent possible damage.

The Prestige SuperTweeter is designed to provide the extended high frequency response demanded by modern programme material and sources. The Dual Concentric still provides the heart of the musical information as a coherent point source, but at extreme high frequencies is supplemented by the wideband SuperTweeter. Musical information contains transient information, beyond the range of human hearing for pure tones. For music to be accurately reproduced, we have found it essential to accurately preserve this information.

Although initially conceived to complement the Prestige HE range, from Stirling up to Westminster Royal, it will equally find application with any of our earlier classic designs, be they previous Prestige models, HPD, Monitor Gold or Monitor Silver for example. Adjustments are provided for crossover frequency and level to enable accurate matching.

### *Features*

- High stiffness titanium dome to minimise effects of dome break-up and extend frequency response.
- Copper clad aluminium voice coil on aluminium former for high power handling.
- Neodymium magnet system also extends frequency response by minimising eddy current losses in voice coil.
- Provision for driver magnet system earthing (as in Prestige HE series), to avoid interference and information masking caused by radio interference.
- High purity (99.999%) solid silver internal wiring, PTFE coated dielectric.
- Gold plated terminals, adjustment screws and circuit board for high signal transparency.
- Radio Frequency quality inductors in crossover for good high frequency characteristics.
- Non-Inductive Planar Thick Film resistors on ceramic substrates, avoid losses associated with wirewound types.
- High quality polycarbonate film capacitors, selected for high frequency use.
- Unique Tannoy Performance Platform gives stable support and accurate variable adjustment.

# *Unpacking Instructions*

## *Caution:*

**The titanium dome on this SuperTweeter is very delicate. Although protected by a metal mesh, take care to avoid pressing on this during unpacking and installation, in case damage results.**

Each flight case contains the following:

- SuperTweeter units x 2
- Performance Platform x 2
- Adapter plugs x 4
- Adjustment screws x 4
- Felt mat x 2
- Alignment gauge x 1

Always keep the packaging for future use.

## *Environmental considerations*

Do **not** install the SuperTweeter in the following conditions:

- Very warm or humid areas (such as near swimming pools, kitchens or bathrooms).
- Near to a fire or heating appliance.
- In direct sunlight.

## *Wiring*

The SuperTweeter should be connected across your main speakers, positive (red) to positive and negative (black) to negative. If appropriate, remove the two plastic blanking plugs in the terminals. Ensure your amplifier is switched off, and the volume control turned fully down before beginning. Typical wiring configurations are shown in Fig. 1:

- A. Typical single-wired installation. The SuperTweeter is simply connected across your speaker terminals. An optional earth cable can be taken back to your amplifier chassis or ground.
- B. Bi-wiring installation. The SuperTweeter is connected across the HF terminals on your loudspeaker. Again, an earth cable may be taken back to your amplifier, or to the earth terminal on Prestige HE models (shown).
- C. Where appropriate, when using 4mm plugs for your connections, use the supplied adapter plug as shown.

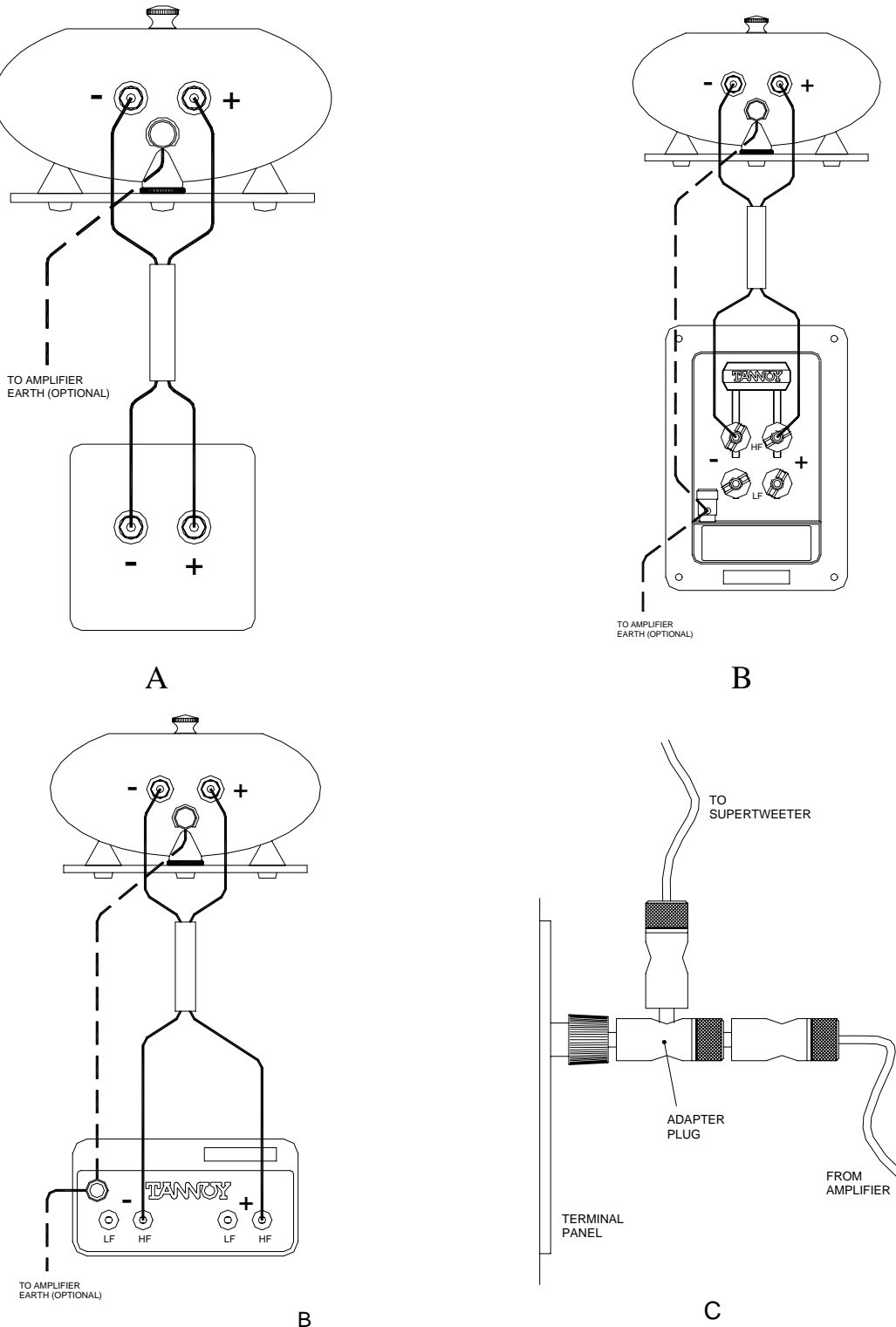
For optimum performance, the central earth connection on the SuperTweeter should be taken back to the amplifier chassis or ground point. This screening effect can give an improvement in detail and clarity, depending on the amplifier used, by reducing radio frequency interference.

It is important to use a high quality cable between the SuperTweeter and the main loudspeakers. For optimum results, our high purity silver SuperLinks are recommended, which are electrically screened and provide an integral earth wire.

Two lengths are available from your authorised Tannoy Dealer:

STL-075      0.75m  
STL-175      1.75m

STL-075 is suitable for most models, while STL-175 is mainly for large horn loaded enclosures, such as Westminster, Westminster Royal, Autograph and GRF. Please check the length required for your speakers, should you require cable.



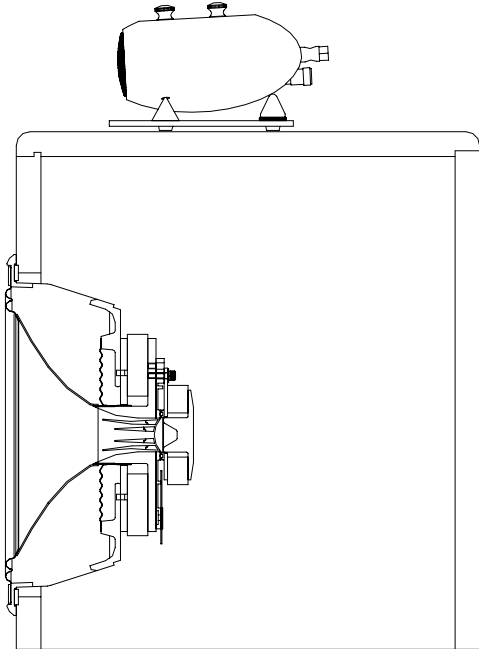
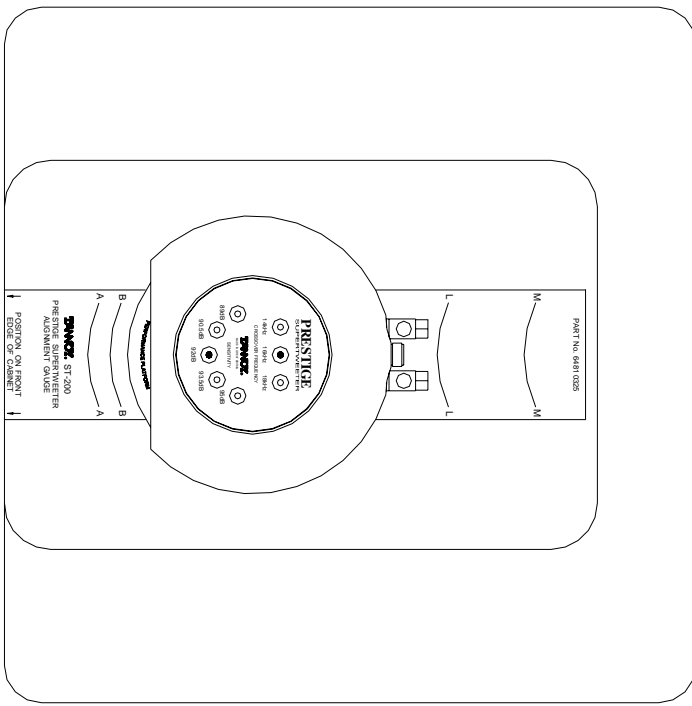
**Fig. 1**

## *Initial Positioning*

With a Tannoy Dual Concentric loudspeaker system, the low and high frequency radiation is generated on the same axis. This is done by mounting the high frequency unit behind the low frequency one, and coupling it to the low frequency radiator via a carefully optimised waveguide through the centre of the drive unit. Low and high frequencies are thus fully integrated at source, to give the most accurate reproduction. The sound will therefore appear to emanate from a point source a little behind the front of the speaker cabinet. The SuperTweeter then needs to be positioned to coincide with this point for best results. For this reason, an alignment gauge, covering our current and past models is included.

Firstly, with reference to Fig. 2, position the felt mat centrally on the loudspeaker enclosure, then the alignment gauge such that it is flush with the front of the cabinet. Use of the felt mat is optional, but does aid performance by preventing unwanted reflections from the cabinet top. Next, using Table 1, place the Performance Platform in the correct position for your loudspeakers. The distance shown is from the front edge of the cabinet, and refers to the letter coded marking on the alignment gauge. Note that due to the large distance involved, the alignment gauge is unsuitable for the Autograph- please use a tape measure in this case. Finally, withdraw the alignment gauge from under the Performance Platform, ensuring it does not move.

The SuperTweeter is then positioned on the Performance Platform, making sure the front two cones engage the two indents in the SuperTweeter housing.



**Fig. 2**

MODEL	DISTANCE	POSITION	SENSITIVITY	XOVER FREQ
<b>6 1/2" Dual Concentrics:</b>				
D100, D300, System 6	45mm	A	89dB	18kHz
<b>8" Dual Concentrics:</b>				
Esher SL25, NFM 8, DTM 8, System 8, D500, D750	57mm	B	90.5dB	18kHz
Greenwich	87mm	D	90.5dB	18kHz
<b>10" Dual Concentrics:</b>				
LSU/HF/3LZL (Monitor Red)*, LSU/HF/3LZG (Monitor Gold)*, HPD295*, [*General setting, from baffle front], Darking SL35, Windsor, Ascot T125, Chester T165, Dorset T185, Mayfair T225	78mm	C	90.5dB	14kHz
Buckingham	78mm	C	92.0dB	14kHz
System 10	78mm	C	92.0dB	16kHz
D700	78mm	C	92.0dB	18kHz
3LZ, Chevening, Eaton, Caernarvon, SRM10B	105mm	F	90.5dB	14kHz
Stirling/HW	105mm	F	92.0dB	14kHz
Stirling/TW/TWW, Turnberry HE	105mm	F	92.0dB	16kHz
Stirling HE	105mm	F	90.5dB	18kHz
<b>12" Dual Concentrics:</b>				
LSU/HF/12L (Monitor Silver)*, LSU/HF/12L (Monitor Red)*, LSU/HF/128G (Monitor Gold)*, *[General setting from baffle front].	87mm	D	92.0dB	14kHz
HPD315* *[General setting from baffle front].	87mm	D	90.5dB	14kHz
System 12, D900	87mm	D	93.5dB	16kHz
Canterbury (corner), Lansdowne, Chatsworth, Lancaster 12, DC4000, Edinburgh/HW, Canterbury 12, SRM12X, LGM (Little Gold Monitor)	120mm	G	92.0dB	14kHz
Mansfield, Devon, Cheviot, Bradley SL65, Chertsey SL45, Balmoral Edinburgh/HW, Canterbury 12,	120mm	G	90.5dB	14kHz
Edinburgh/TW/TWW/HE	120mm	G	93.5dB	16kHz
<b>15" Dual Concentrics:</b>				
Monitor Black*, HPD383*, Albury	100mm	E	92.0dB	14kHz
LSU/HF/15L (Monitor Silver)*, LSU/HF/15L (Monitor Red)*, LSU/HF/158G (Monitor Gold)* *[General setting from baffle front].	100mm	E	93.5dB	14kHz
System 15, System 215	100mm	E	95.0dB	16kHz
Amesbury, Berkeley, Arden, Arundel, Balmoral, M3000	130mm	H	92.0dB	14kHz
York, Lancaster 15, SRM15X, FSM, M1000, SGM1000, SGM3000	130mm	H	93.5dB	14kHz
Dreadnought	130mm	H	95.0dB	14kHz
GRF (horn), Canterbury 15 (incl. HE)	155mm	J	95.0dB	14kHz
GRFM/HW	195mm	K	95.0dB	14kHz
GRFM/TW/TWW/HE, Westminster TW	195mm	K	95.0dB	14kHz
RHR	247mm	L	95.0dB	14kHz
Westminster Royal/HE	317mm	M	95.0dB	14kHz
Autograph	405mm	-	95dB	14kHz

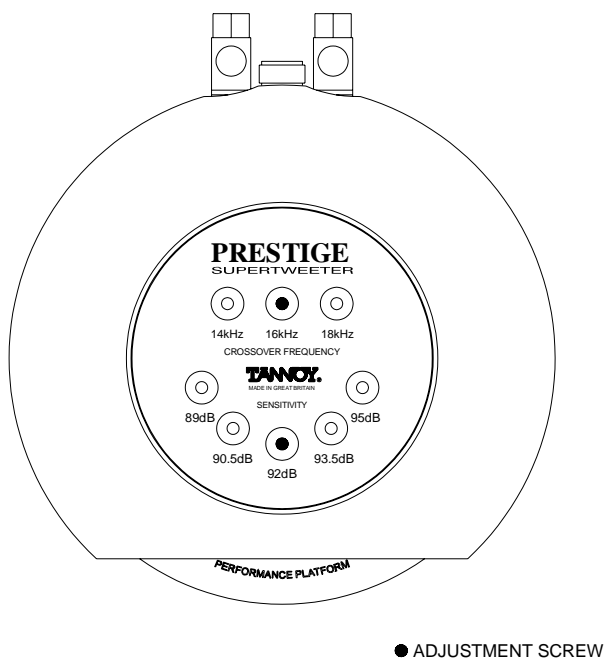
TABLE 1

## *Adjustments*

Referring to Table 1 again, select the sensitivity and crossover frequency settings to suit your loudspeakers, and install the adjustment screws into the correct position on the SuperTweeter adjustment panel (Fig. 3).

The rear support cone on the Performance Platform may be adjusted for height, then secured using the locking thumb screw. If possible, adjust so that the SuperTweeter is pointing at ear height when seated.

After double checking the wiring, you are now ready to switch your amplifier on. Select some music you are familiar with, and gently advance the volume control to normal listening level.



**Fig. 3**

## *Running In*

Like all loudspeakers, the drive unit in your SuperTweeter requires a while to reach optimum performance, as the stresses in the materials relax. For this reason, it is beneficial to run the system at fairly high levels at normal room temperature for approximately 20 hours to reach best results.



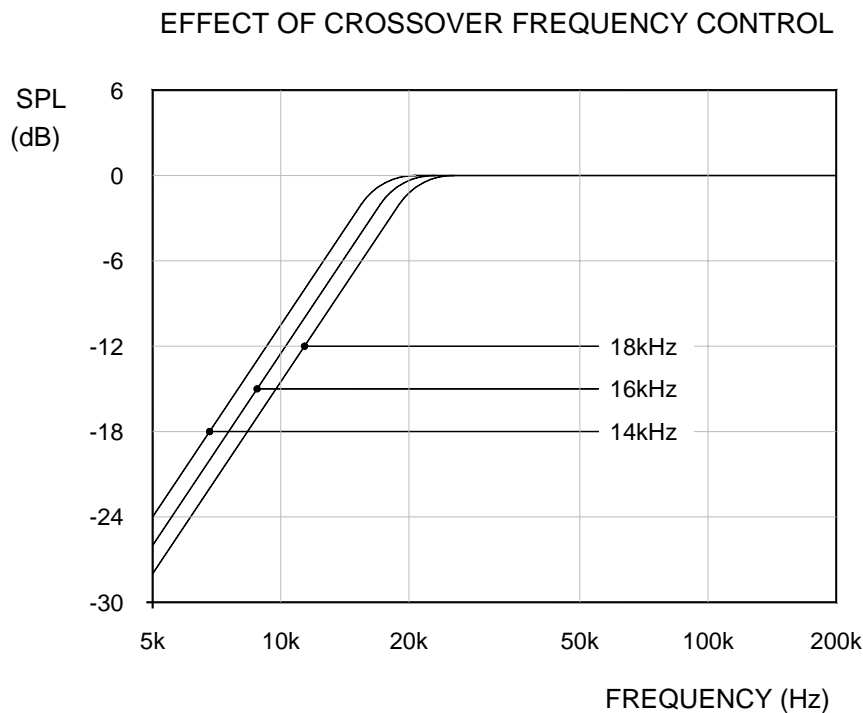
## ***Fine Tuning***

Once the SuperTweeter is fully run in, you are in a position to fine tune the system. The settings chosen for SENSITIVITY and CROSSOVER FREQUENCY are those recommended by Tannoy as being optimum for your loudspeakers. However listening room acoustics and personal taste may dictate some adjustment. Remember that like a subwoofer, the SuperTweeter should not draw attention to itself, but should offer a natural enhancement to the upper frequencies.

The effect of the SENSITIVITY adjustment screw is to increase or decrease the output over the full frequency operating range of the SuperTweeter, in 1.5dB steps. The CROSSOVER FREQUENCY control offers 3 positions for the SuperTweeter energy to be rolled in (Fig. 4).

The position of the SuperTweeter has been determined in Table 1 to correspond to the acoustic centre of your Tannoy Dual Concentric model. However the user is free to experiment with the positioning. For example, in difficult listening room acoustics, the SuperTweeter may be brought further forward.

The SuperTweeter has a protective mesh grille which can be removed for optimum performance. It is simply held in place by the magnetic field from its own magnet. Carefully remove by gently holding the mesh on the edges and pulling forward. Take care not to touch the fragile dome.



**Fig. 4**

## *Care of the SuperTweeter*

Two finishes of the enclosure are available, oiled walnut and lacquered black ash. For the black ash finish, simply wipe with a soft slightly damp cloth.

The walnut enclosure has been hand waxed before dispatch from our finishing workshop. To maintain the natural wood appearance, it is important that only a wax of similar formulation is used.

A jar of specially formulated wax is available from your authorised Tannoy dealer. This should be applied carefully (to avoid brass adjustment panel and terminals) and sparingly, with a soft lint-free cloth, such as muslin.

The Performance Platform should only be cleaned with a soft slightly damp cloth, and shined with a soft duster.

**Under no circumstances should chemical cleaning agents be used.**

## *Warranty and Service*

Your Tannoy SuperTweeter will operate for many years without trouble provided it is not misused. The high peak power handling of Tannoy loudspeakers will allow responsible use with larger amplifiers on wide dynamic range material.

**Take care with any amplifier, irrespective of power output, to avoid abnormal conditions such as switch-on surges or output overload (clipping) that may result in peaks of power greatly over the rated output.**

The SuperTweeter is warranted against manufacturing defects in material or craftsmanship over a period of 5 years from the date of purchase. This warranty is in addition to your statutory rights as a customer. Tannoy cannot however be held responsible for failures caused by abuse, unauthorised modifications, improper operation or damage caused by faults elsewhere in your system.

The determination of the cause of failure will be made by Tannoy Limited or its authorised Distributor or Service Agent, based on physical inspection of the failed parts.

If you suspect a problem with your SuperTweeter, in the first instance discuss it with your Tannoy Dealer. The dealer has the expertise and experience to help you troubleshoot the system and assess the situation.

If you continue to have problems, contact your Tannoy Distributor or Tannoy Customer Services at our Coatbridge address.

## *Technical Specifications*

Recommended amplifier power:	Up to 250W
Power rating to DIN IEC 268:	135W RMS 550W peak
Maximum sensitivity (2.83V @ 1m):	95dB
Nominal impedance:	8 ohm
Frequency response (-6dB):	To 54kHz, usable output (-18dB) to 100kHz

### **DRIVE UNIT:**

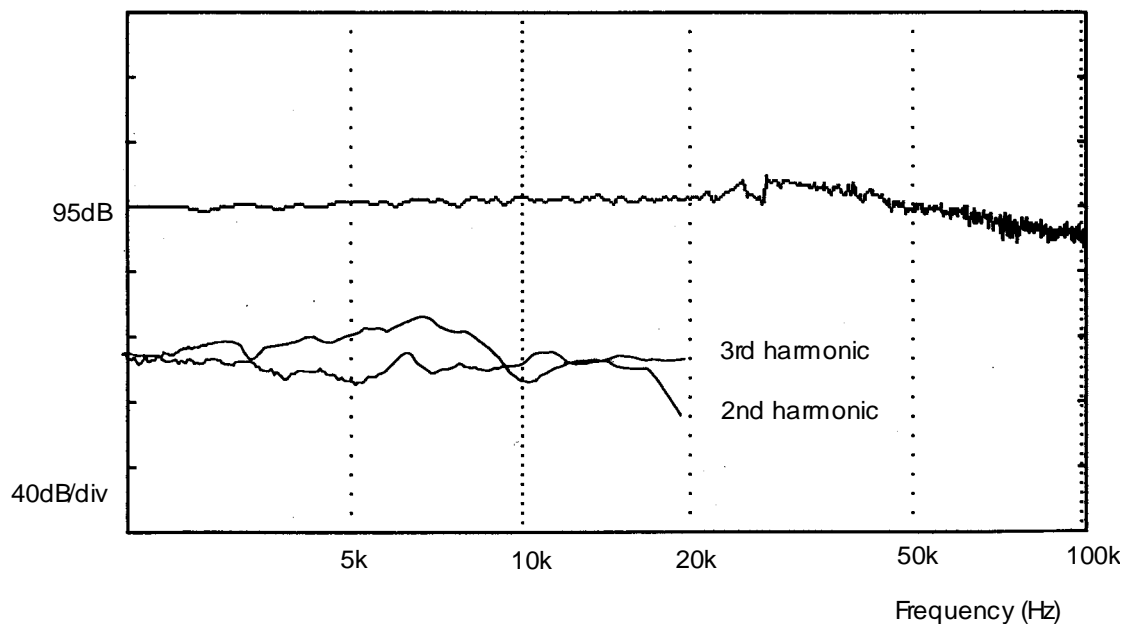
Driver type:	25mm diameter 25 micron titanium dome, 24 Karat vapour deposited gold finish, with neodymium magnet system
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### **CROSSOVER:**

Crossover type:	3 <sup>rd</sup> order compensated high pass
Crossover frequency:	14, 16 or 18kHz adjustable
Level adjustment:	89dB, 90.5dB, 92dB, 93.5dB, 95dB

Due to our policy of continuous improvement, all specifications are subject to change without notice.

Sound Pressure Level (2.83V @ 1m)



**SUPERTWEETER FREQUENCY RESPONSE & DISTORTION**

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