

TANNOY

SuperTweeter Manual
Prestige GR
ST-300Mg

Prestige GR & ST-300Mg SuperTweeter

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WARRANTY

No maintenance of the loudspeaker is necessary.

As part of the MUSIC Group, Tannoy is committed to providing the highest quality products, service and user experience for our customers. One element of this commitment is our after sales support which now incorporates our extended Limited Warranty. In the event of any concern that is not addressed by this extended Limited Warranty we would ask you to contact us at care@music-group.com

For full warranty details including the extended Limited Warranty, please visit <http://www.music-group.com/warranty.aspx> and register your purchase online at www.music-group.com or www.tannoy.com

INTRODUCTION

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

The Prestige GR and ST-300Mg SuperTweeters are designed to provide the extended high frequency response demanded by modern programme material and sources. Musical information contains transient information, beyond the range of human hearing for pure tones. For music to be accurately reproduced, we find it essential to accurately preserve this information.

Even with conventional CD sources, the addition of a SuperTweeter reduces phase error and improves transient performance significantly below 20 kHz. This leads to increased tonal accuracy at all frequencies, as the harmonics of instruments are not distorted in time. This benefits any high quality loudspeaker, but especially the Dual Concentric, with its superior time alignment in the first place. It should be noted though, that even with the addition of a SuperTweeter, the Dual Concentric still acts effectively as a coincident point source, as it is still responsible for generating the vast majority of musical information. Further clear benefits result from improved high frequency dispersion.

Although initially conceived to complement our modern Dual Concentric loudspeakers, these SuperTweeters 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 magnesium alloy dome to minimise effects of dome break-up and extend frequency response.
- Neodymium magnet system also extends frequency response by minimising eddy current losses in the voice coil.
- Provision for driver magnet system earthing to avoid interference and information masking caused by radio interference.
- Very high purity silver plated matched crystal OFC internal wiring, PTFE coated dielectric.
- Plated terminals and adjustment screws for high signal transparency.
- Air core inductors in crossover for good high frequency characteristics.
- Non-inductive metal oxide film resistors on ceramic substrates, avoid losses associated with wirewound types.
- High quality polypropylene film capacitors, selected for high frequency use.

UNPACKING INSTRUCTIONS

Caution:

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

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. Ensure your amplifier is switched off, and the volume control turned fully down before beginning.

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. (See Fig 1)

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 Tannoy loudspeakers that have this provision. (Shown in Fig 2)

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. A thick and heavy cable is not needed for good performance due to the small signal currents involved and could pull the SuperTweeter off your loudspeaker causing damage.

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. 3 and Table 1, position the SuperTweeter on the cabinet, then the alignment gauge such that it is flush with the front of the cabinet. The distance shown is from the front edge of the cabinet, and refers to the letter coded marking on the alignment gauge. Finally, withdraw the alignment gauge from under the Supertweeter, ensuring it does not move. Note that due to the large distance involved, the alignment gauge is unsuitable for the Tannoy Autograph- please use a tape measure in this case.

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.

The vertical angle on the SuperTweeter may be adjusted by slightly rotating the machined tweeter housing about the friction damped yoke, on which it sits. Optimum performance will be achieved if the SuperTweeter diaphragm 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.

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 1.5 dB 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 guard which can be removed for optimum performance. Carefully remove by gently pulling forward. Take care not to touch the fragile dome.

CARE OF THE SUPERTWEETER

Wood is a product of nature. Every piece of wood, even from the same tree is slightly different in colour, texture, and grain, making each SuperTweeter unique. Wood contains natural imperfections, which add to its character and appeal. Natural features such as small sap pockets, pin knots, and streaks are normal and should not be considered defects.

Two finishes of the enclosure are available, walnut / gold anodised machined aluminium and satin black / silver anodised machined aluminium. For the satin black 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 provided with Tannoy Prestige loudspeakers and is also available from your authorised Tannoy dealer. This should be applied sparingly and carefully (avoiding metalwork and terminals), with a soft lint-free cloth, such as muslin.

Under no circumstances should chemical cleaning agents be used.

TECHNICAL SPECIFICATIONS

PERFORMANCE

Recommended amplifier power	Up to 350 Watts RMS
Continuous power handling	175 Watts RMS 700 Watts peak
Maximum sensitivity (2.83V @ 1m)	95 dB
Nominal impedance	8 Ohms
Frequency response (-6dB)	62 kHz, usable output (-18 dB) to 100 kHz

DRIVE UNITS

Driver type	25 mm diameter 44 micron magnesium alloy dome, with neodymium magnet system
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CROSSOVER

Crossover type	3rd order high pass
Crossover frequency	14, 16 or 18 kHz adjustable
Level adjustment	89 dB, 90.5 dB, 92 dB, 93.5 dB, 95 dB

CONSTRUCTION

Dimensions (H x W x D) (incl. terminals)	130.4 x 146.9 x 206.2 mm (5.1 x 5.8 x 8.1")
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FINISH

Prestige GR	Walnut / Gold anodised machined aluminium
ST-300Mg	Satin Black / Silver anodised machined aluminium

SET-UP DIAGRAMS

Table 1

MODEL 10" Dual Concentric:	DISTANCE	POSITION	SENSITIVITY	XOVER FREQ
LSU/HF/3LZL (Monitor Red)*, LSU/HF/3LZG (Monitor Gold)*, HPD295* Darking SL35, Windsor, Ascot T125, Chester T165, Dorset T185, Mayfair T225	73 mm	A	90.5 dB	14 kHz
Buckingham	73 mm	A	92.0 dB	14 kHz
System 10, System 1000	73 mm	A	92.0 dB	16 kHz
D700	73 mm	A	92.0 dB	18 kHz
3LZ, Chevening, Eaton, Caernarvon, SRM10B	100 mm	D	90.5 dB	14 kHz
Stirling HW	100 mm	D	92.0 dB	14 kHz
Stirling TW / TWW, Turnberry HE / SE	100 mm	D	92.0 dB	16 kHz
Glenair 10	100 mm	D	90.5 dB	16 kHz
Kensington / SE	100 mm	D	93.5 dB	14 kHz
Definition DC10 / DC10i	73 mm	A	92.0 dB	16 kHz
Definition DC10A	82 mm	B	93.5 dB	18 kHz
Stirling HE / SE / GR	82 mm	B	90.5dB	18 kHz
Turnberry LE / LE75	100 mm	D	93.5 dB	16 kHz
Turnberry GR	100 mm	D	92.0 dB	16 kHz
Kensington GR	100 mm	D	93.5 dB	16 kHz
12" Dual Concentric:				
LSU / HF / 12L (Monitor Silver)*, LSU / HF / 12L (Monitor Red)*, LSU / HF / 128G (Monitor Gold)*, HPD315*	82 mm	B	92.0 dB	14 kHz
System 12, System 1200, D900	82 mm	B	93.5 dB	16 kHz
Canterbury (corner), Lansdowne, Chatsworth, Lancaster 12, DC4000, SGM1000 Edinburgh/ HW SRM12B / X, SGM12B / X, LGM (Little Gold Monitor)	115 mm	E	92.0 dB	14 kHz
Mansfield 12, Devon, Cheviot, Bradley SL65, Chertsey SL45, Balmoral Edinburgh / HW, Canterbury 12,	115 mm	E	90.5 dB	14kHz
Edinburgh / TW / TWW / HE	115 mm	E	93.5 dB	16 kHz
Yorkminster HE / SE	115 mm	E	93.5 dB	14 kHz

Table 1 continued

MODEL 15" Dual Concentric:	DISTANCE	POSITION	SENSITIVITY	XOVER FREQ
Monitor Black*, HPD383*, Albury	95 mm	C	92.0 dB	14 kHz
LSU / HF / 15L (Monitor Silver)*, LSU / HF / 15L (Monitor Red)*, LSU / HF / 158G (Monitor Gold)*	95 mm	C	93.5 dB	14 kHz
System 15, System 215	95 mm	C	95.0 dB	16 kHz
Amesbury, Berkeley, Arden, Mansfield 15 Arundel, Balmoral, M3000	125 mm	F	92.0 dB	14 kHz
York, Lancaster 15, SRM15B / X, FSM, M1000, SGM1000, SGM3000	125 mm	F	93.5 dB	14 kHz
Dreadnought	125 mm	F	95.0 dB	14 kHz
GRF (horn), Canterbury 15 HE / SE	150 mm	G	95.0 dB	14 kHz
GRFM / HW	190 mm	H	95.0 dB	14 kHz
GRFM / TW / TWW / HE,	190 mm	H	95.0 dB	14 kHz
Westminster TW	190 mm	H	95.0 dB	16 kHz
RHR	242 mm	I	95.0 dB	14 kHz
Westminster Royal / HE / SE	312 mm	J	95.0 dB	14 kHz
Autograph	405 mm	MEASURE	95 dB	14 kHz
Glenair 15	125 mm	F	93.5 dB	16 kHz
Canterbury GR	150 mm	G	95.0 dB	16 kHz
Westminster Royal GR	312 mm	J	95.0 dB	16 kHz

* General setting from baffle front.

SET-UP DIAGRAMS

Fig. 1 Connecting in Single Wire Mode

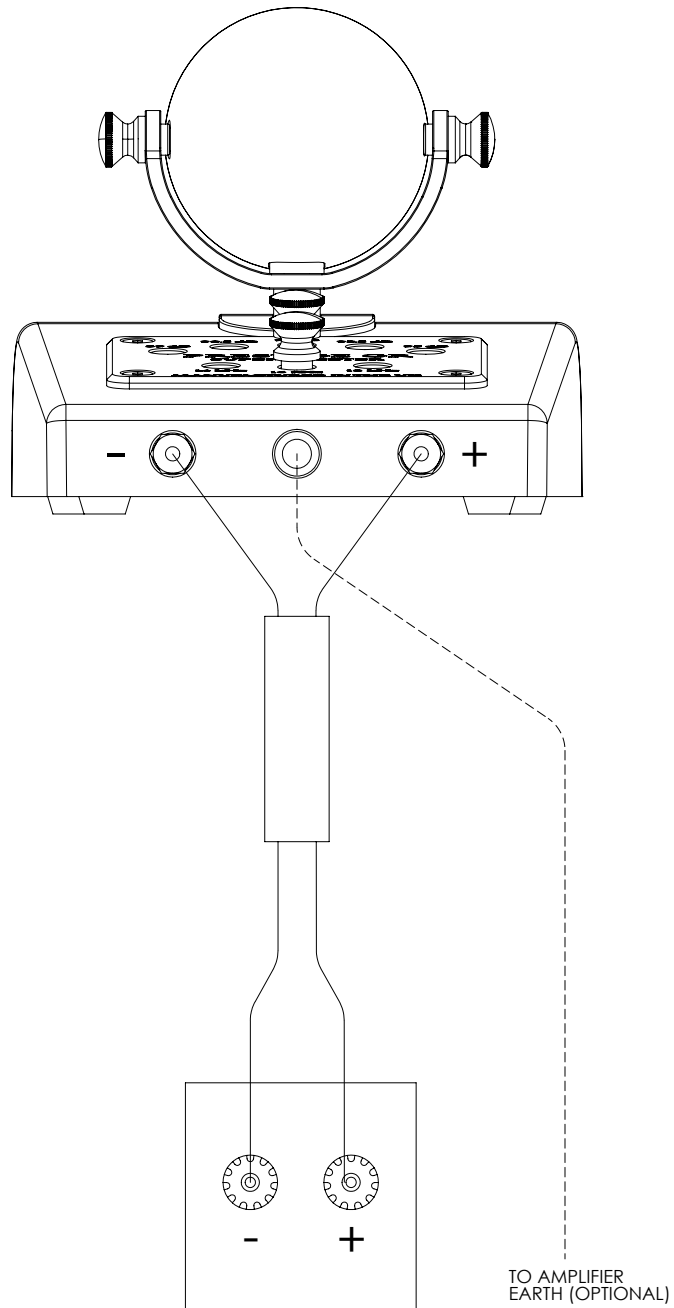
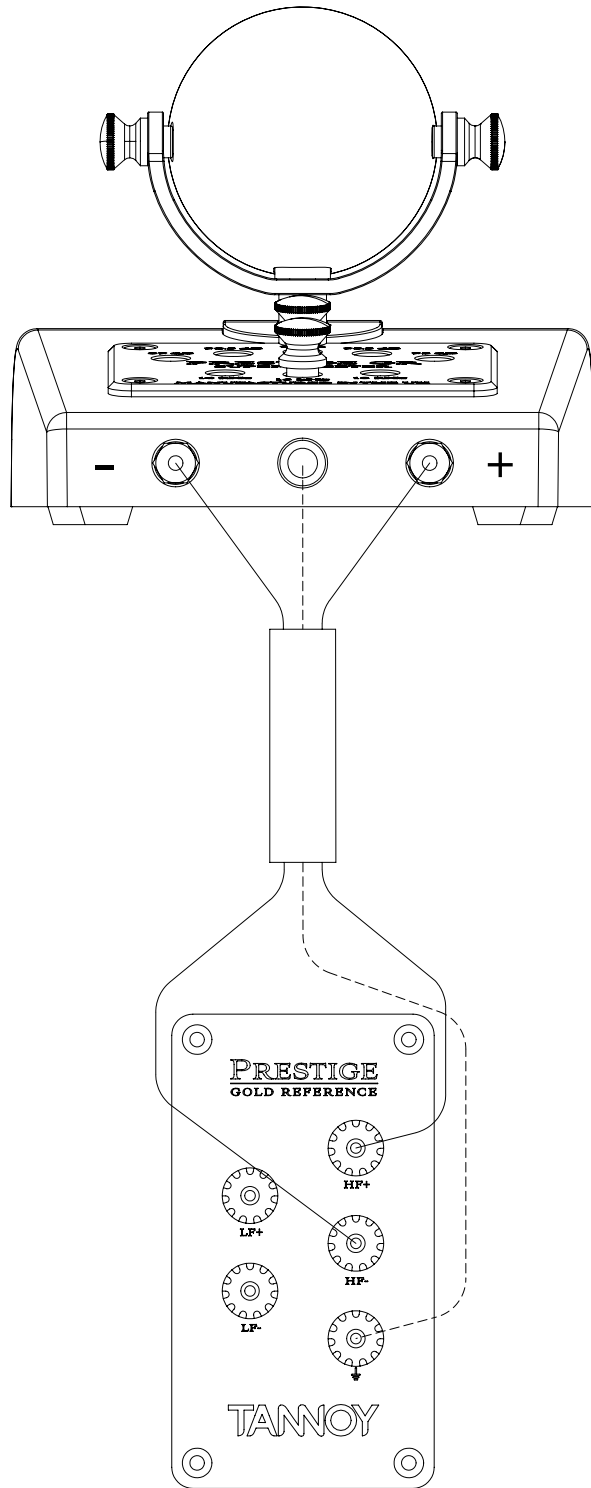


Fig. 2 Connecting in Bi-Wire Mode



SET-UP DIAGRAMS

Fig. 3 Positioning SuperTweeter on Cabinet

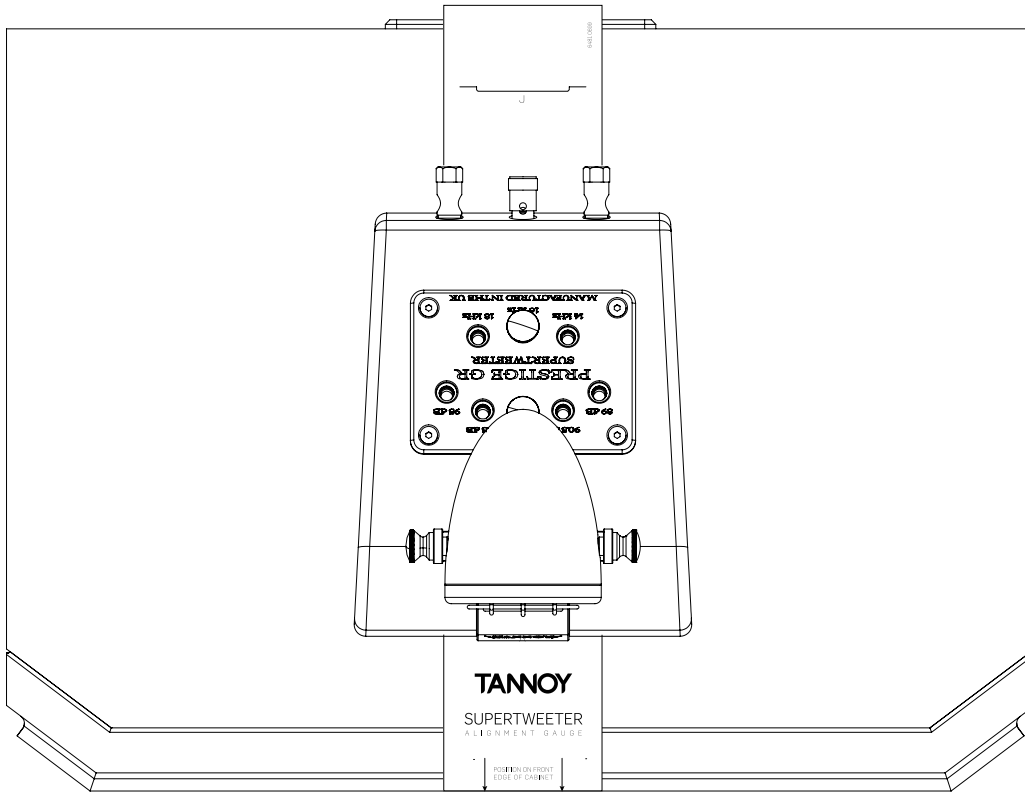
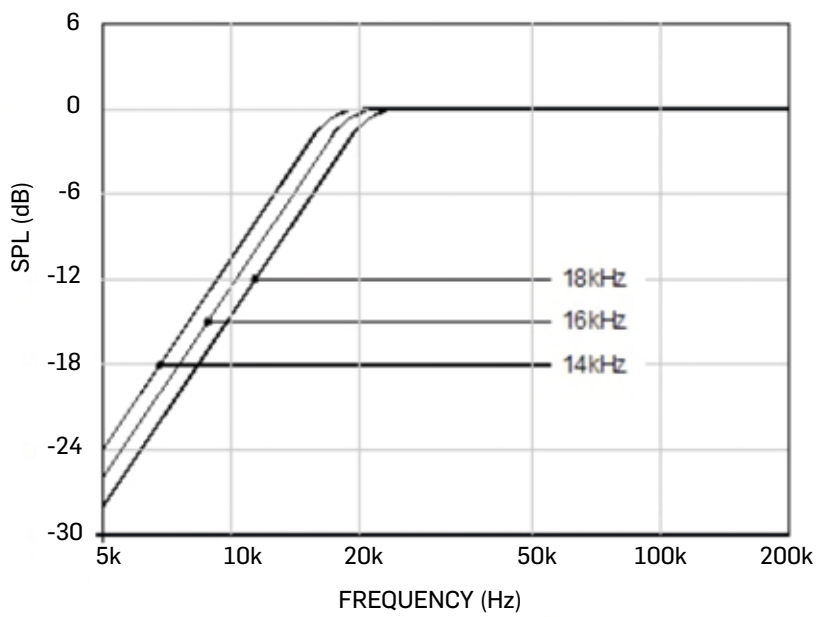


Fig. 4 Effect of Crossover Frequency Control



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