TANNOY®

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PRESTIGE

OWNER'S MANUAL

The Kensington

Estd. TANNOY® 1926

The Kensington

Tannoy - A Short History

In the early days of broadcasting radio sets needed both low and high voltage DC power and this had to be supplied by batteries. The lead acid batteries commonly used in the radio equipment of the time therefore needed regular recharging.

In London, in 1926, Guy R. Fountain perfected a new type of electrical rectifier with the aim of designing a charger more suitable for use in the home. His rectifier consisted of two dissimilar metals held in a special electrolyte solution; one was Tantalum and the other an alloy of Lead. So successful was this invention that Guy Fountain founded a British company by the name of Tannoy, a contraction of the words 'Tantalum' and 'Alloy', and this brand name soon became internationally renowned and highly regarded in all aspects of sound reproduction.

Early experiments with moving coil loudspeakers with DC energised magnets proved to be the company's first foray into the field of loudspeaker technology. A discrete two-way loudspeaker system followed in 1933 and shortly after a range of microphones and loudspeakers capable of high power handling. These developments led the company to become world famous in the field of public address and sound distribution, with countless prestigious installations completed in subsequent decades. So much so that the Oxford English Dictionary adopted the word Tannoy as the generic term for a PA system.

Tannoy has always been at the forefront of the communications revolution, developing its own equipment and production technology. The company has built up a fund of knowledge and experience, which has proved invaluable in the development of loudspeakers for an exceptionally wide range of applications. The famous Tannoy Dual Concentric™ loudspeaker driver principle was created and developed under Guy Fountain's direction in the late 1940's. It is still highly regarded by music enthusiasts, recording facilities and broadcast studios, worldwide due to its unique point source dispersion properties. Due to the complex design, where the high frequency unit is mounted behind, and concentrically with, the low frequency unit, the low and high frequencies are fully integrated at source. It is this feature that gives the Dual Concentric™ driver such unique sound reproduction qualities.

Guy Fountain retired in 1974 but the Tannoy Company maintains his philosophy and, as such, remains dedicated to the accurate and realistic reproduction of music for those enthusiasts and audio professionals around the world.

The Tannoy Research and Development team has continued to refine the innovative Dual Concentric™ principle. Using the latest design and material technologies, with sophisticated circuit techniques in crossover design; Tannoy has produced a loudspeaker system with superb reproductive capabilities and exceptionally wide dynamic range.

The Kensington

In combining the best of traditional crafts with the latest production and design skills Tannoy presents the Kensington loudspeaker. The Kensington embodies the Tannoy philosophy. Cabinets in selected hardwoods are hand finished and polished to a standard that is unsurpassed.

The Kensington is a truly special loudspeaker. The speaker uses the classic Alcomax 3 version of the famous Tannoy Dual Concentric driver. This magnet system endows the Dual Concentric with an exceptional transient response and increased sensitivity. This high performance driver is installed in braced birch-ply and particleboard cabinet with hardwood veneers and solid wooden mouldings. Silver-plated van den Hul wiring is used throughout. High frequency energy can be tailored through a high current gold-plated switch block with controls for both treble energy and roll off. Low frequency alignment is through the Tannoy Distributed Port System (DPS). The specially designed twin-roll impregnated fabric surround used on the drive unit's cone ensures midrange purity combined with tight, controlled bass.

Unpacking Instructions

Unfasten the bottom of the carton and remove all staples. Fold the end leaves out of the way and remove the packing tray to reveal the plinth and bottom of the loudspeaker cabinet. Locate and remove from the carton the accessories pack. Turn the carton and loudspeaker over so that the cabinet now stands on the floor inside the carton. Lift the carton upwards to reveal the loudspeaker.

Examine all packing material and inspect the carton for signs of external damage. If there is evidence of excessive mishandling in transit, resulting in damage to the loudspeaker, inform the carrier and supplier immediately. Always keep the packing in such circumstances for subsequent examination.

Tannoy strongly suggests that you store the complete packaging set for possible future use.

Initial Positioning

Locate the loudspeakers so that the favourite listening position is approximately 15° from the axes of the cabinets. The axes of both cabinets should intersect at a point slightly in front of the listening position. Remember that the proximity of the loudspeakers to walls and corners will affect the sound. Some experimentation will probably be needed to fine-tune the stereo image depth and low frequency sound quality. Close-to-wall positions - and room corners more so - have the effect of increasing very low frequency sound energy. Reflective adjacent walls may upset the stereo image by causing unwanted reflections.

The loudspeakers are designed to be used at least 1m from any sidewall or reflective surface and at least 0.5m away from a rear wall. Only in this position will their exceptional stereo image depth capabilities be realised.

Holes are provided in the base of the speakers for down-spikes that give maximum stability, these special floor coupling spikes are provided in the accessory pack and these should be screwed into the base of the loudspeakers, taking care not to over-tighten them. When the loudspeaker is installed in its upright position, the spikes should pass between the weave of your carpet to contact the floor beneath. Adjust the spikes for maximum stability.

For polished wooden floors, hard nylon self-levelling 'ball-and-cup' feet are provided.

Amplifier Connections

Cable Choice

Always use the best quality of cable available within your budget. High quality audio signals passing from the amplifier to the loudspeaker are unusual in their demands on the cable. Wide dynamic range and frequency bandwidth information has to coexist with the ability to transmit peak currents of at least 10amps, without incurring any loss or signal impairment. This explains why the sound quality of the information reproduced by the loudspeakers is so dependant on the physical properties of the cables connecting them to the amplifier.

We would recommend that you always keep the cable runs the same length for each speaker.
Remember, cable construction can affect the sound quality so be prepared to experiment to find a cable that suits your ear and audio system.

Terminal Panel and Connection of Earth or 'Ground' Lead
(See figs. 1, 2, 3 and 4)

In order to take advantage of the driver earthing feature within the Prestige range and to optimise performance further, use a shielded or screened loudspeaker cable. The screening termination should be connected to the earth or 'ground' (green) terminal on the loudspeaker and to the ground or earth connection on the amplifier. Alternatively if you are not using a screened loudspeaker cable but wish to utilise the earthing facility, run a single cable between the earth or 'ground' (green) terminal on the loudspeaker to the earth (ground) connection on the amplifier.

Connection in Single Wire Mode (See fig. 2)

Connect the pair of link cables supplied in the accessory kit to each loudspeaker terminal panel as follows:

- Starting with the red (positive) lead, loosen the locking pin which passes through the plug by turning the plastic head of the locking pin one full anti-clockwise rotation.
- The 'unlocked' plug can now be inserted into the red (positive) low frequency (LF) terminal on the loudspeaker.
- Tighten the plug by turning the locking pin clockwise until finger-tight.
- The spade connection at the other end of the lead should be connected to the red (positive) high frequency (HF) terminal on the loudspeaker. To do this, loosen the terminal nut sufficiently to allow insertion of the spade connector and then re-tighten the terminal nut finger-tight.
- Repeat this operation for the black (negative) HF and LF terminals
- Repeat the whole operation for the other loudspeaker

For optimum performance in single wire mode, loudspeaker cable connections from the amplifier should now be made to the high frequency (HF) terminals of the loudspeaker:

- The positive (plus) terminal on the amplifier left channel (marked + or coloured red) must be connected to the positive HF terminal on the left speaker. The left speaker is the one on the left as you look at the stereo pair from your listening position.
- The negative (minus) terminal on the amplifier left channel (marked - or coloured black) must be connected to the negative HF terminal on the left speaker.
- Repeat this connection process for the right speaker. Remember that the positive (+ or red) on the amplifier must be connected to the positive (+ or red) on the speaker and the negative (- or black) to negative.

Select a signal source, such as a CD player; switch on the amplifier and slowly turn up the volume control to check that both loudspeakers are reproducing bass and treble information.

Connection in Bi-Wire Mode (See fig. 3)

Bi-Wiring Theory

Loudspeakers need power signals to produce acoustic energy when reproducing music. The range of electrical currents passing down the cable from the amplifier to the loudspeaker is very wide. In decibel terms this is called the dynamic range. Modern loudspeakers are capable of resolving a dynamic range of at least 80 dB with a suitable power amplifier.

An 80 dB dynamic range corresponds to voltages of between 50 Volt and 0.005 Volt at the loudspeaker terminals or equivalent currents of between 0.0006 and 6 Amp. This is a truly wide range of electrical signals to pass down one cable without some interactions causing a loss of resolution in the very small signals.

When electricity passes down a wire or cable, what goes in at one end is unfortunately different from what comes out at the other. The degree of loss or modification of a signal depends on the physical characteristics of the cable and the nature of the signal. Heavy electrical currents flowing down thin conductors cause heating effects. Very high frequency signals passing along conductors or cables of certain lengths cause electromagnetic radiation effects (aerials). Electrical cables are selected for minimum loss and maximum information resolution considering the type of electrical signals they are designed to carry.

A good solution to the problem is to 'Bi-Wire' the loudspeakers to the amplifier. This means providing two separate sets of cables from the power amplifier to each loudspeaker and dividing the electrical signals into high current, 'slow' signals and light current, 'fast' signals. Of course, the loudspeaker must be fitted with two pairs of terminals to take the two sets of cables; your Tannoy loudspeakers are of course equipped for just this type of connection.

Please note in bi-wire mode that the link leads, which are supplied in the accessory pack, should NOT be fitted.

- Be sure that the amplifier is switched OFF and then prepare the two sets of cabling for each 'side' of the system separately. Measure and cut four lengths of cable, two per speaker.
  Label two of the cable lengths Left LF and Left HF (low frequency and high frequency) then repeat this process for the right pair.
- If your amplifier is not equipped with separate output terminals for bass and treble information then, at the amplifier end of the cables, twist the Left LF+ (positive) and the Left HF+ (positive) together. Connect these to the amplifier Left channel positive terminal marked + (plus) or coloured red.
  Twist the Left LF- (negative) and the HF- (negative) cables together and connect them to the amplifier Left channel negative terminal marked - (minus) or coloured black.
  At the loudspeaker end connect the cables labelled Left LF+ and Left LF- to the left hand loudspeaker LF terminals, ensuring that you note the polarity markings on the cable sheathing.
  Then proceed to connect the Left HF+ and Left HF- to the HF terminals on the same loudspeaker.
- Repeat this process to connect the right hand loudspeaker to the amplifier right channel output, once again ensuring that polarity is correct throughout.
- Switch the amplifier on with the volume control set at its lowest setting. Select a favourite source and slowly turn up the volume to a low level. Check that bass and treble information is being reproduced from both speakers - if not, switch off the amplifier and recheck the connections.

Bi-Amping (See fig. 4)

Bi-Amping extends the principle of bi-wiring one stage further. In this connection option separate power amplifiers are used for bass and treble signals in each loudspeaker. Four mono (or two stereo) amplifiers of the same type are required for a stereo pair of loudspeakers. Ensure that the cable links between the loudspeaker terminals are removed and that correct polarity is maintained throughout.

If two stereo amplifiers are used, it is recommended that one amplifier supply bass information to left and right loudspeakers and the other, the treble information.

It is essential that the coupling link cables between the loudspeaker terminals be removed. Avoid potential damage to your amplifier – ensure that all connections are secure and the polarity is correct in all wiring.

Connection Of Earth Or 'Ground' Lead (See figs. 2, 3 and 4)

To optimise performance further, use a shielded or screened loudspeaker cable. The screening termination should be connected to the earth or ground (green) terminal on the loudspeaker and to the ground or earth connection on the amplifier. Alternatively if you are not using a screened loudspeaker cable but wish to utilise the earthing facility, run a single cable between the earth.

It is essential that the coupling link cables between the loudspeaker terminals be removed.
Avoid potential damage to your amplifier - ensure that all connections are secure and the polarity is correct in all wiring.

Grille Removal

Special acoustically transparent cloth is used in the grilles. However, for ultimate fidelity the enthusiast will find it is best to use these loudspeakers with their grilles removed during listening.

The front grille is removable for access to the front panel controls. Unscrew the grille removal knob from the rear of the cabinet, and screw into the hole in the bottom of the grille. Using this knob, pull the bottom of the grille away from the cabinet; the grille will drop down from its upper location. Take care not to damage the wooden lower part of the cabinet. To replace the grille engage the top of the grille into the slot in the cabinet and push the grill into the recess. Apply slight pressure to the bottom, until the grille clicks in place.

Loudspeaker System Adjustment (See fig. 5)

Each loudspeaker is fitted with two controls located on the front baffle beneath the detachable grille. These high current switch blocks are labelled ROLL OFF and ENERGY. They can be used to compensate for the varied acoustic characteristics of listening rooms. The controls should be adjusted with the amplifier tone controls in the 'flat' or uncompensated position. Each loudspeaker should be adjusted individually. Fully rotating the amplifier balance control, to select first one loudspeaker and then the other, is the easiest way to do this.

The Energy control has five positions. It allows the output of the high frequency compression drive unit to be increased or decreased from the linear or 'flat' position over a frequency band from approximately 1 kHz to 20kHz.

The Roll off control has five positions (+2, level, -2, -4 and -6dB per octave) and provides adjustment at extreme high frequencies from 5 kHz to 20kHz.

The energy control has a shelving effect over the 1kHz to 20kHz frequency band whereas the roll off control increases or decreases the slope of the extreme high frequency response hinging about 5 kHz.

The flattest, most linear response from the loudspeaker will be obtained with both controls set at the LEVEL position, and this position should be used for initial listening tests. If the overall quality of the high frequency sound seems too prominent the -1.5 or -3 positions for the Energy control should be tried. If the sound appears subdued in the treble region +1.5 or +3 settings may be preferred. Once the energy control setting has been established the Roll off control can be adjusted to reduce or slightly increase the extreme high frequency content if necessary.

Remember the changes that can be made by moving either control from one position to another are subtle. They may not easily be heard if the programme material has very little content in the frequency band under consideration. Choose a well-balanced piece of music with a full spectrum of sound. The correct setting will be found when the loudspeakers are no longer evident and only the musical performance is heard.

Running in

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

Tannoy Dual Concentric™ Drive Unit

One of the unique advantages of the Tannoy Dual Concentric™ principle is that the low and high frequency sound radiation is generated on the same axis. The high frequency unit is mounted behind, and concentrically with, the low frequency unit. High frequency sound radiates from the centre of the low frequency unit through a carefully designed high frequency exponential horn. Low and high frequencies are therefore fully integrated at source. It is this feature that gives the Dual Concentric™ driver such unique sound reproduction qualities.

There are other significant benefits. The high frequency unit does not obstruct the low frequency unit in any way (a unique feature when compared with other so called coaxial systems). Polar dispersion of sound is symmetrical in both horizontal and vertical planes. By careful crossover network design the virtual acoustic sources of the high and low frequency units can be made to occupy the same point on the axis. Therefore the total sound appears to emanate from a single point source located slightly behind the drive unit. This means that the loudspeakers, when fed from a high quality stereo source, can recreate a full and accurate stereo image.

The Low Frequency Section

The low frequency section of the Dual Concentric™ driver has exceptional power handling and dynamic range. The low frequency cone piston is produced from selected paper pulp. This is specially treated to absorb internal resonance modes

The twin roll fabric surround is also damped and shaped correctly to terminate the moving cone and provide optimum compliance and linearity at large excursions. The cone piston is driven by a high power motor system consisting of a four-layer coil suspended in a precision magnetic air gap. The coil is wound with a special high temperature adhesive system and individually cured to ensure reliable operation at high peak power inputs. The shape of the low frequency cone is arranged to provide optimum dispersion of audio frequencies at both the high and low ends of the spectrum. The cone flare continues the high frequency horn profile to ensure a smooth transition at the crossover point.

The High Frequency Section

The high frequency driver consists of a wide dynamic range compression unit giving superb transient performance with a smooth uncoloured response. The compression unit feeds acoustic power through a multiple phase compensating device to the throat of a solid steel acoustic horn. This horn provides an acoustic impedance transformation to match the compression unit radiation into the listening environment.

A magnesium alloy diaphragm, formed by a specially developed five-stage process, produces a piston with a very high stiffness to mass ratio. Optimum molecular grain structure gives long-term durability. A very low mass precision aluminium coil provides the driving force for the diaphragm, with fine multi-stranded copper lead out wires to ensure reliability. A rear damped acoustic cavity controls the compression driver response and ensures further correct acoustic impedance matching to the horn throat.

The response of the compression horn driver extends two full octaves below the crossover frequency to eliminate colourations that can arise through operation over the fundamental resonance region.

The Magnetic Circuit

An Alcomax 3 high-energy magnet provides flux generation for both high frequency and low frequency driving motors. Precision air gaps contain the magnetic flux surrounding each coil. The high frequency air gap has a unique shu8nt member to apportion the total magnetic flux in the correct ratio between low and high frequency units. This gives an optimum acoustic balance. Precision machined, low carbon steel pole pieces ensure unsaturated operation, linear flux fields and a high heat sinking capability. High power inputs can therefore be handled with minimum change of impedance due to temperature effects. A very robust, high quality, precision pressure die-cast chassis locates the whole magnet assembly and positions the moving parts with high accuracy. This provides long-term reliability and yet does not interfere with the acoustic radiation from the individual sections.

Alcomax Magnet

Alcomax 3 is an especially high-energy permanent magnet. The unusual iron/nickel alloy is doped with cobalt, aluminium and other rare metals to produce a magnetic material with very special properties. Alcomax 3 has a high remanent magnetism and energy product. In other words, it magnetises to a high level and retains that unusual degree of magnetisation. Alcomax 3 is also an electrical conduction. These properties give the Dual Concentric drive unit using an Alcomax 3 magnet an exceptionally clean transient response and increased sensitivity.

The Crossover Network

During the design of the crossover network the acoustic, mechanical and electrical interactions of the high and low frequency sections have been fully analysed. The crossover is therefore an integral part of the design of the system. The crossover network provides complex equalisation in both amplitude and phase for each section and fully integrates the response at the crossover point. All components are high precision, low-loss and thermally stable. Quality, low-loss polypropylene capacitors are used. Air-cored inductors avoid saturation effects. A unique shunt element technique controls the motional impedance of the drive units.

All components in the crossover network are hard wired to eliminate unwanted metal-to-metal contact and ensure freedom from vibration. The components are laid out to minimise inter component coupling and are placed well away from the driver magnetic field. Top quality silver-plated Van den Hul wiring is used throughout. High current switch blocks with gold-plated screw terminals permit user adjustment of high frequency sound radiation to suit differing listening environments.

The complementary design of crossover and drive units means that the loudspeaker system as a whole behaves as a minimum phase system over the audio band and therefore the acoustic sources of the high and low frequency sections are aligned in time and space to ensure accurate reproduction of stereo images.

A Note on Auditory Perception

Our hearing mechanism locates natural sound sources with great accuracy by using the naturally occurring phase differences (or arrival times) at middle frequencies, and intensity differences at higher frequencies, between each of our ears. Naturally occurring sounds pass through the air to the ears at constant speed (345 metres/second or 1132 feet/second). All frequencies travel at the same speed and therefore a frequency independent time delay is associated with the distances involved. (The familiar time delay between a flash of lightning and the associated clap of thunder is an example). Human hearing relies on the constant nature of the time delay with the intensity to locate natural sounds accurately. A pair of Tannoy Prestige loudspeakers can uniquely reconstruct stereo images and provide excellent localisation of recorded sounds. The Tannoy Dual Concentric™ driver principle ensures that the source of sound at high frequencies is one the same axis as the source of sound at low frequencies.

The careful design of crossover network complements the drive unit to provide a coincident sound source at frequencies where the human ear derives phase information for localisation. The loudspeaker system exhibits a time delay response that is in essence independent of reproduced frequencies. In addition, the amplitude (or intensity) response is linear, smooth and consistent. This provides the correct intensity information to recreate the original sound stage.

Care of the Cabinet

The cabinet is constructed from carefully selected solid hardwood and veneers that have been hand finished to exacting standards. The wood should only be cleaned with a dry cloth or with a light application of quality non-silicone furniture polish, taking care not to get polish on the grille cloth.

In common with all solid wood furniture, exposure to extremes of heat, cold and varying humidity will cause the wood to ease slightly. Therefore it is recommended that the loudspeaker is protected from environmental extremes to guard against any such occurrence. Any wood will change colour when subjected to the UV content of ambient light. Light veneer will darken appreciably to a rich natural patina, while dark wood may lighten.

Faultfinding

Tannoy loudspeakers are designed and manufactured to be reliable. When a fault occurs in a hi-fi system the effect is always heard through the loudspeakers although they may not be the source of the fault. It is important to trace the cause of the problem as accurately as possible. A fault heard on one source (only CD or tape for instance) is most unlikely to be a loudspeaker problem. Loudspeakers do not in themselves generate hum, hiss or rumble although high quality, wide-bandwidth loudspeakers may emphasise such problems.

Tannoy Quality

An important part of Tannoy's design philosophy is to produce loudspeakers with a level of performance beyond the most exacting specifications of contemporary source equipment.

Loudspeaker design is no longer a 'black art'. It is now possible to use computers to model designs and predict results. Comprehensive test equipment is used to pinpoint problems with cabinets or drive units; anechoic chambers help in producing accurate measurements. Both computer aided design (CAD) and sophisticated test equipment are used extensively at Tannoy, but we always remember that listening tests must be the final judge.

Tannoy follows a policy of stringent quality control procedures using sophisticated measurement facilities. Strict quality control is more easily achieved because all the loudspeakers are built in-house at the Tannoy factory in Scotland. All drive units are designed and manufactured by Tannoy. All incoming parts are thoroughly tested to ensure that they are as specified. Not only is all data computerised by CAD but rigorous testing procedures during construction ensures every loudspeaker meets or exceeds our exacting standards.

Warranty and Service

Your Tannoy Prestige loudspeakers will operate for many years without trouble provided that simple precautions are followed.

Tannoy loudspeakers are 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 operations or damage caused by faults elsewhere in your system.

Tannoy Ltd or its authorised Distributor or Service Agent will make the determination of the cause of failure based on physical inspection of the failed parts. If you suspect a problem with your loudspeakers then 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.

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

Caution

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 measuring greatly over the rated output.

FIGURE 1: Terminal Panel Connections

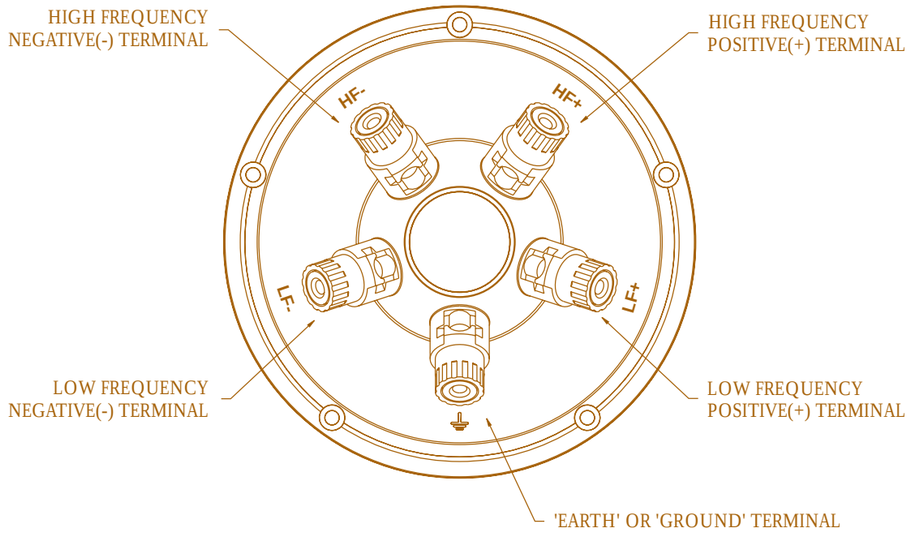


FIGURE 2: Single Wire Mode and Earth (Ground) Lead Connection

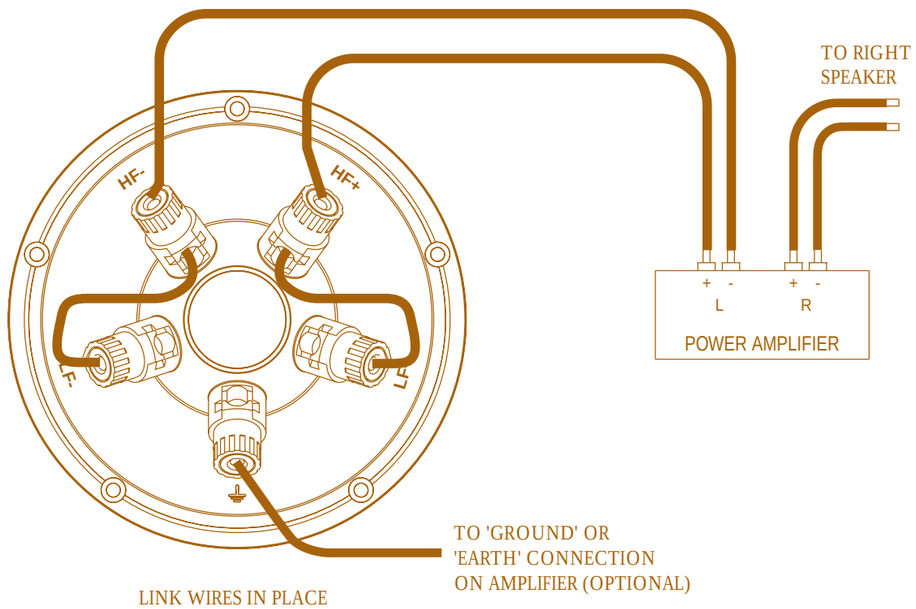


FIGURE 3: Bi-Wire Mode and Earth (Ground) Lead Connection

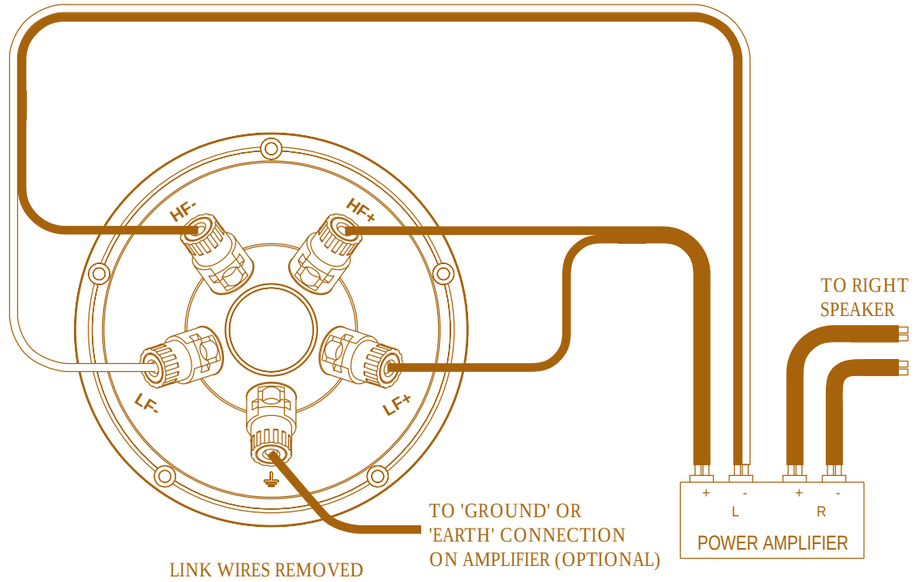


FIGURE 4: Bi-Amping Mode and Earth (Ground) Lead Connection

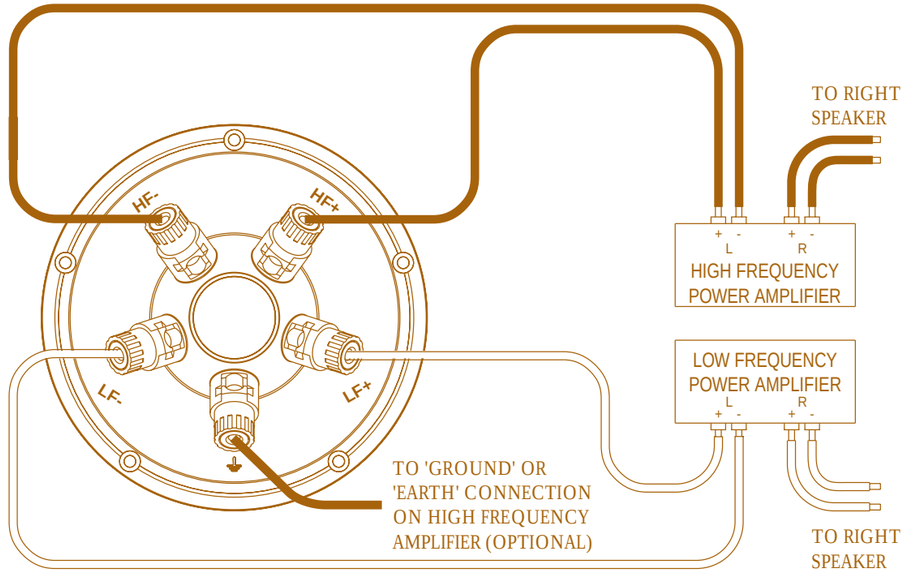
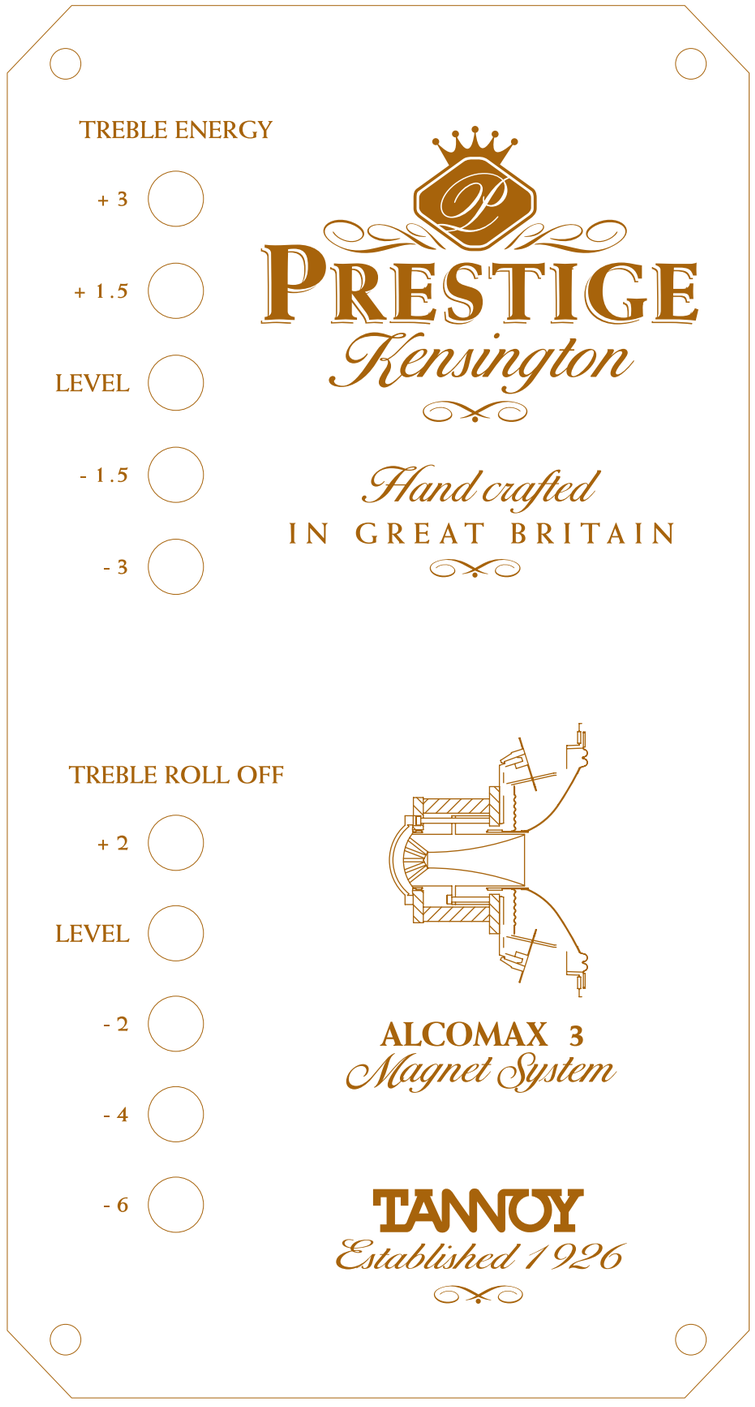


FIGURE 5: Front Crossover Panel



Technical Specifications

CABINET DIMENSIONS	1100H x 406W x 338D mm
ENCLOSURE VOLUME	105 litre
ENCLOSURE TYPE	Coupled reflex distributed port
REC. AMPLIFIER POWER	50 to 225 watt per channel
POWER RATING	135 watt RMS
	400 watt peak
MAXIMUM SPL	114 dB at 1 metre for 135 watt RMS
	119 dB at 1 metre for 400 watt peak
TOTAL HARMONIC DISTORTION	Less than 1.2% at 135 watt RMS (50Hz to 20kHz)
SENSITIVITY	93 dB for 2.83 volt at 1 metre
NOMINAL IMPEDANCE	8 ohm
MINIMUM IMPEDANCE	5.5 ohm
DISPERSION	90 degree conical
PHASE RESPONSE	System behaves substantially as a frequency independent time delay
FREQUENCY RESPONSE	29 Hz - 22 kHz, -6dB
CROSSOVER FREQUENCY	1.1 kHz
CROSSOVER ADJUSTMENT	+/-3 dB over 1.1 kHz to 22 kHz shelving.
	+2 dB to -6 dB per octave over 5 kHz to 22 kHz slope
CROSSOVER TYPE	2nd order compensated LF, 2nd order compensated HF.
	Bi-Wired, Hard-Wired passive, low loss. Time compensated.
DRIVER TYPE	250 mm (10") Dual Concentric™, treated paper cone
	Alnico magnet system, twin roll fabric surround.
CABINET CONSTRUCTION	High density 18mm birch ply baffle and rear panel
	Top and sides 18mm particle board.
	Internally crossbraced and heavily damped
WEIGHT	37kg
PACKED WEIGHT (EACH)	43.5kg
PACKED DIMENSIONS (EACH)	1300h x 550w x 447d mm