



## Product Description

The VQ 60 is a full range, three-way loudspeaker system designed for applications which require very high output capability with class leading pattern control. The VQ 60 is perfectly suited for use in arrays or singly in demanding music or speech applications.

Unlike line array solutions, the VQ 60 can produce enough power and clarity to be used individually maintaining your building's aesthetics.

With low frequency extension to 90Hz, the VQ 60 can be combined with various subwoofers for extended bandwidth.

The VQ 60 can be configured for use in Bi-Amp or Tri-Amp mode, in conjunction with a suitable digital signal processor (DSP).

Horn design involves balancing compromise.....until now.

Key performance parameters that can be controlled by the designer include: frequency response (both on and off-axis), horizontal and vertical beamwidth, directivity index, electrical impedance, harmonic distortion, and low frequency cut-off. Our unique approach in keeping what is effectively a Dual Concentric behind a single horn gives us many performance advantages. Performance of the VQ 60 in terms of accuracy & sound quality is second to none.

The VQ 60 incorporates a unique driver technology to radiate a coherent single point source for superior dispersion control when coupled to a PSW™ (Point Source Waveguide). This advanced design aligns the acoustical centres of the transducers providing a single coherent wavefront emanating from the throat. The PSW™ waveguide achieves an optimum balance of extremely well controlled coverage, smooth frequency response, and natural sound character.

The low frequency section, two (12") low frequency transducers, offers high power handling and low power compression for high continuous SPL capability. A newly designed LF loading design provides the highest possible sensitivity for low/mid frequency output. The VQ 60 is part of an expanding line up of VQ products, addressing the requirement for compact dimensions without compromising performance in any way.

## Features

- "PSW™ Waveguide" - Point source design (Patent applied for).
- Excellent Phase Coherence
- Perfect time alignment without the associated problems of multi source interference
- Compact Dimensions
- Class leading directivity characteristics
- Extremely high sensitivity, therefore high SPL's can be achieved with a very modest amount of amplifier power
- Exceptional transient response

## Applications

- Large Houses of Worship
- Large Corporate AV applications
- Stadiums & other Sports facilities
- Dance Clubs
- Live sound – concert halls, theatres, open-air venues

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



# VQ 60

# TANNOY®

## TECHNICAL SPECIFICATIONS

<b>System</b>	<b>VQ 60</b>	
<b>System Type</b>	3-Way Full Range - Point Source	
<b>Frequency Response (-3dB) <sup>(1)</sup></b>	115Hz - 23kHz	
<b>Frequency Range (-10dB) <sup>(1)</sup></b>	90Hz - 27kHz	
<b>Operating Modes</b>	Bi-Amp (LF, MF/HF) User Configurable Tri-Amp (LF, MF, HF) User Configurable	
<b>System Sensitivity &amp; Operating Freq. (1W @1m) <sup>(2)</sup></b>		
<b>Bi-Amp</b>		
LF (80Hz - 450Hz)	105dB (2.0V @ 4 Ohms)	
Passive MF/HF (450Hz - 23kHz)	115dB (2.83V @ 8 Ohms)	
<b>Tri-Amp</b>		
LF (80Hz - 450Hz)	105dB (2.0V @ 4 Ohms)	
MF (450Hz - 7kHz)	115dB (2.83V @ 8 Ohms)	
HF (7kHz - 23kHz)	115dB (2.83V @ 8 Ohms)	
<b>Dispersion (-6dB)</b>	60 degrees conical	
<b>Driver Complement</b>		
LF	2 x 300mm (12.00") Low Frequency Transducers, Semi Horn Loaded	
MF/HF	Dual Concentric™ Compression driver loaded into a single PSW™ Waveguide	
<b>Crossover</b>	Biamp - 450Hz (active) 7kHz (passive) Tri-amp 450Hz, 7kHz (active)	
<b>Directivity Factor (Q)</b>	21.2 averaged 1kHz to 10kHz	
<b>Directivity Index (DI)</b>	13.3 averaged 1kHz to 10kHz	
<b>Rated Maximum SPL <sup>(2)</sup></b>	Average	Peak
LF	135dB	141dB
MF	138dB	144dB
HF	135dB	141dB
Passive MF/HF	138dB	144dB
<b>Power Handling <sup>(3)</sup></b>	Average	Programme
LF @ 4 Ohms	1000W (63.3V)	2000W
MF @ 8 Ohms	200W (40V)	400W
HF @ 8 Ohms	90W (27V)	180W
Passive MF/HF @ 8 Ohms	200W (40V)	400W
<b>Recommended Amplifier Power</b>		
LF	2000W into 4 Ohms	
MF	400W into 8 Ohms	
HF	200W into 8 Ohms	
Passive MF/HF	400W into 8 Ohms	

<b>Nominal Impedance</b>		
LF	4 Ohms (4.1 Ohms Minimum)	
MF	8 Ohms (7.0 Ohms Minimum)	
HF	8 Ohms (8.7 Ohms Minimum)	
<b>Distortion</b>	2nd Harmonic	3rd Harmonic
<b>110dB SPL</b>		
500Hz	2.726	1.385
2kHz	1.030	0.231
5kHz	1.807	0.284
<b>115dB SPL</b>		
500Hz	2.917	1.4476
2kHz	1.738	0.256
5kHz	2.948	0.311
<b>120dB SPL</b>		
500Hz	2.941	1.395
2kHz	3.016	0.376
5kHz	5.058	0.387
<b>125dB SPL</b>		
500Hz	3.051	1.371
2kHz	5.230	0.752
5kHz	8.650	0.948

### Construction

<b>Enclosure</b>	18mm (0.71") birch plywood. Internally braced.
<b>Grille</b>	Powder coated perforated steel grille
<b>Finish</b>	Textured black or white paint (custom colours on request)
<b>Connectors</b>	Barrier Strip and Speakon connector
<b>Fittings</b>	8 x Recessed carrying handles 12 x M10 flying inserts
<b>Dimensions</b>	925mm x 694mm x 515mm (36.42" x 27.32" x 20.28")
<b>Net Weight</b>	77kg (169.4 lbs)

#### Notes:

(1) Average over stated bandwidth. Measured at 3 metres on axis, then referred to 1 metre

(2) Unweighted pink noise input, measured at 3 metres in an anechoic chamber, then referred to 1 metre

(3) Accelerated Life Test (EIA RS426-B)

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.

### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 4800	VQ 60	BLACK	1
8001 4801	VQ 60	WHITE	1

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

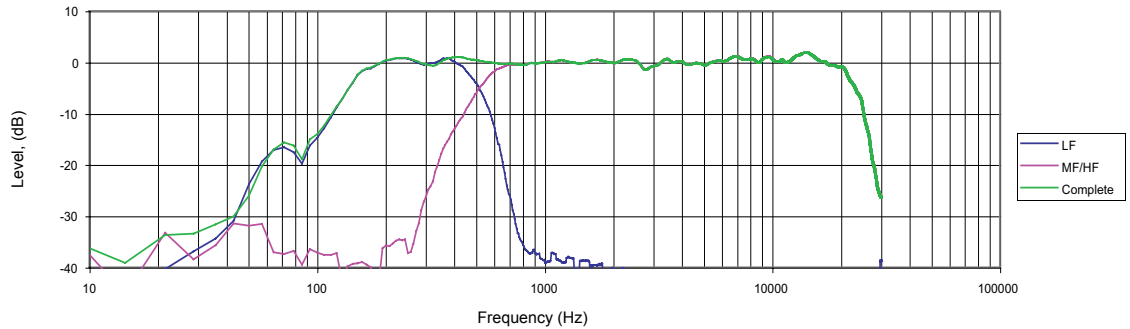
E: [enquiries@tannoy.com](mailto:enquiries@tannoy.com)  
E: [info@tcgroup-international.com](mailto:info@tcgroup-international.com)  
E: [info@tcgroup-americas.com](mailto:info@tcgroup-americas.com)  
E: [enquiries@tannoy.com](mailto:enquiries@tannoy.com)

# tannoy®.com



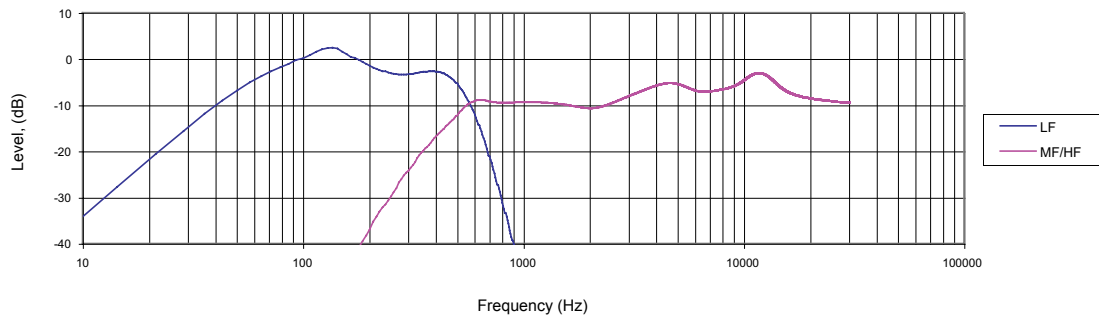
## PERFORMANCE MEASUREMENTS

Frequency Response: Processed Bi-amplified



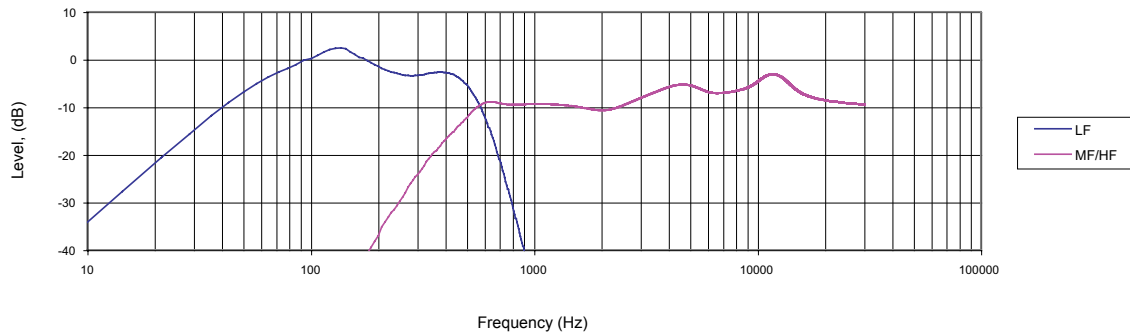
### ANECHOIC FREQUENCY RESPONSE (BI-AMP MODE)

Frequency Response: Digital Signal Processor



### ELECTRICAL TRANSFER FUNCTION FOR OPTIMAL OPERATION (BI-AMP MODE)

Frequency Response: Processed Tri-amplified



### ANECHOIC FREQUENCY RESPONSE (TRI-AMP MODE)

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

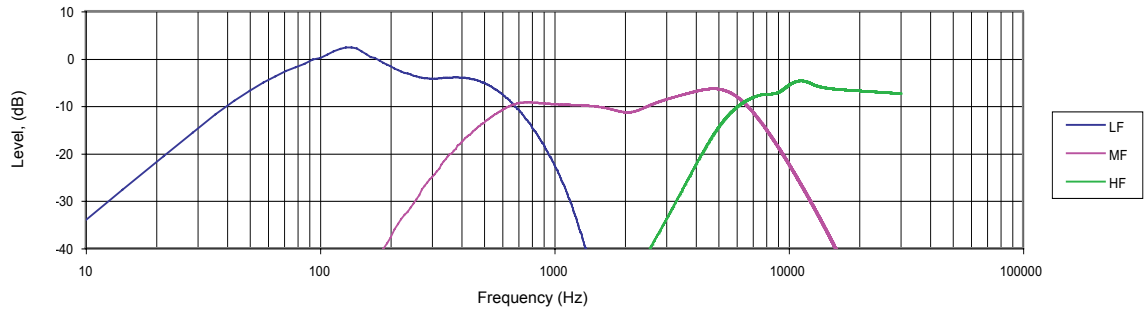
E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



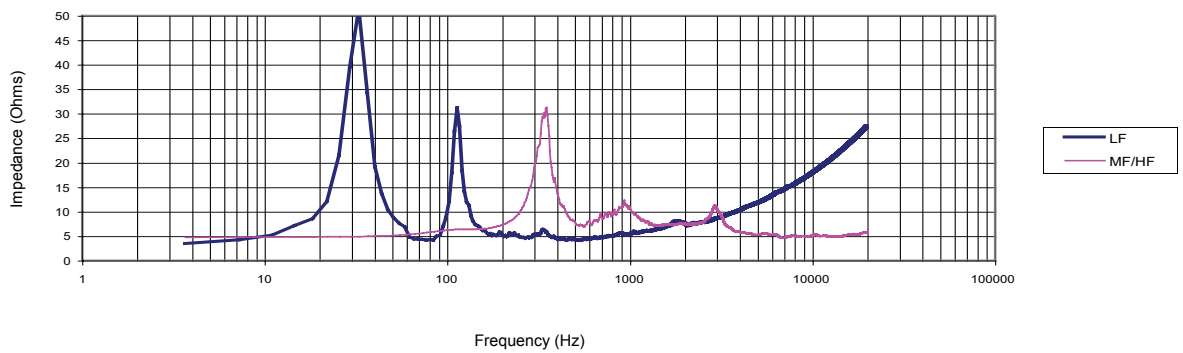
## PERFORMANCE MEASUREMENTS

Frequency Response: Digital Signal Processor



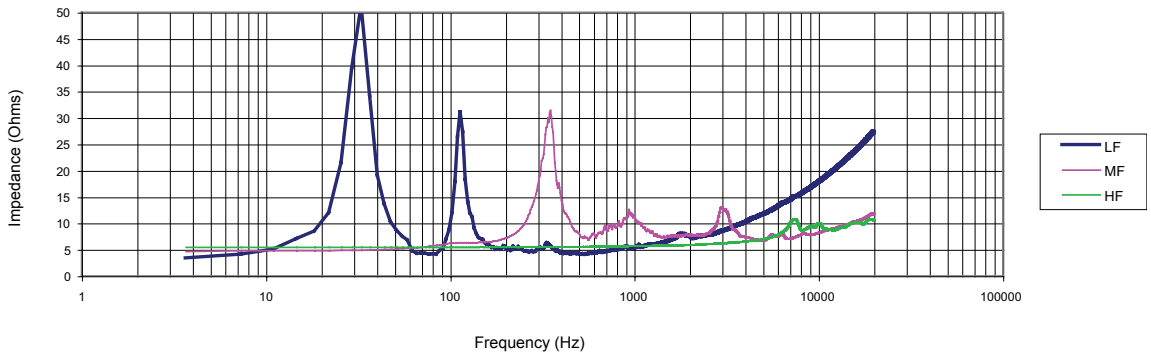
**ELECTRICAL TRANSFER FUNCTION  
FOR OPTIMAL OPERATION  
(TRI-AMP MODE)**

Impedance vs frequency



**IMPEDANCE  
(BI-AMP MODE)**

Impedance vs frequency



**IMPEDANCE (TRI-AMP MODE)**

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

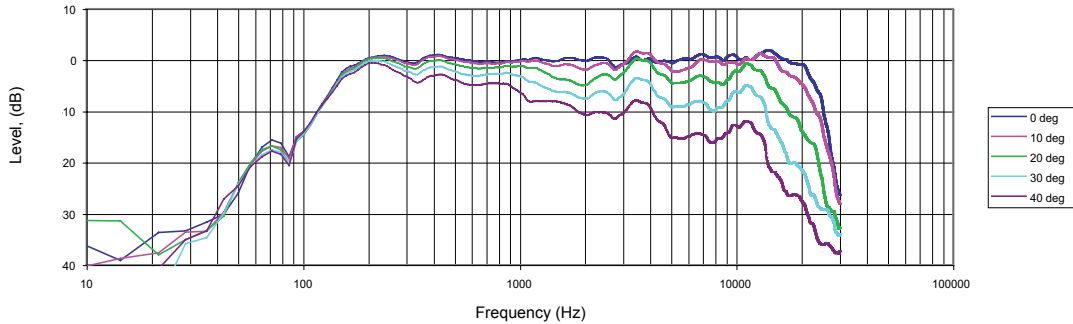
E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



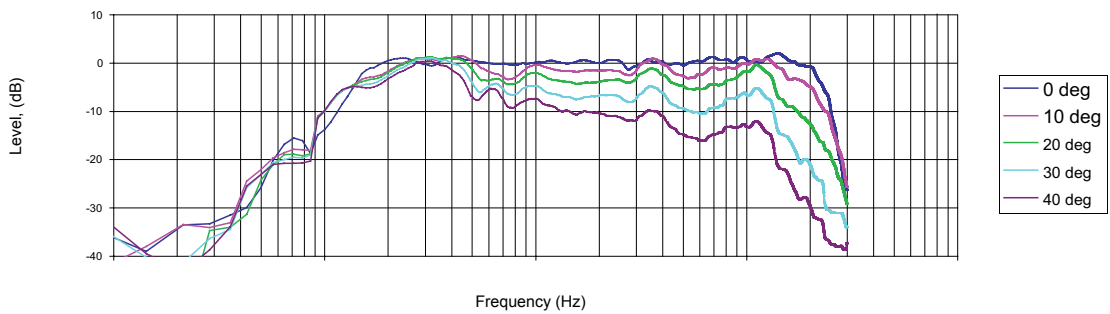
## PERFORMANCE MEASUREMENTS

Frequency Response: Processed Bi-amplified  
Horizontal Off-axis



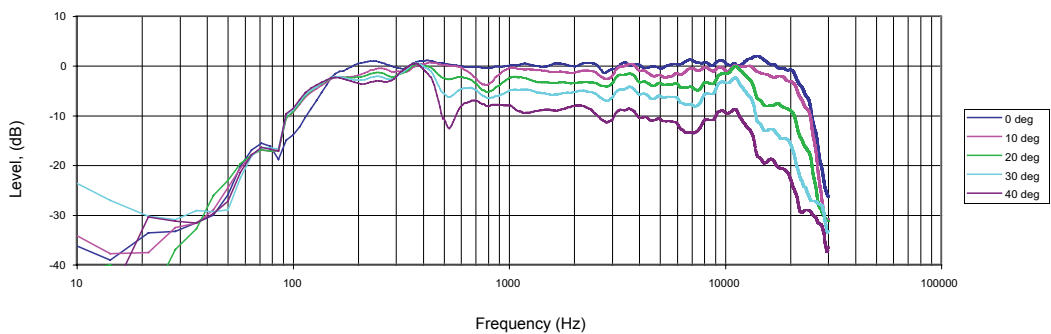
**HORIZONTAL OFF AXIS  
RESPONSE (BI-AMP MODE)**

Frequency Response: Processed Bi-amplified  
Upper Vertical Off-axis



**VERTICAL UPPER  
OFF AXIS RESPONSE  
(BI-AMP MODE)**

Frequency Response: Processed  
Bi-amplified Lower Vertical Off-axis



**HORIZONTAL OFF AXIS  
RESPONSE (BI-AMP MODE)**

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

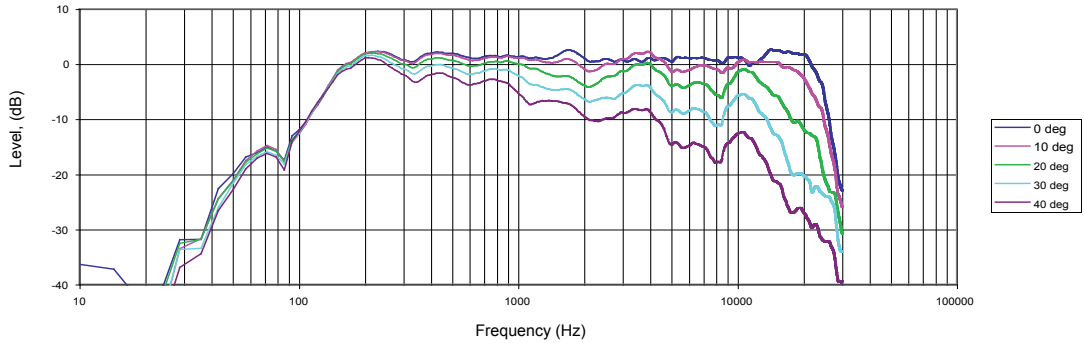
E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



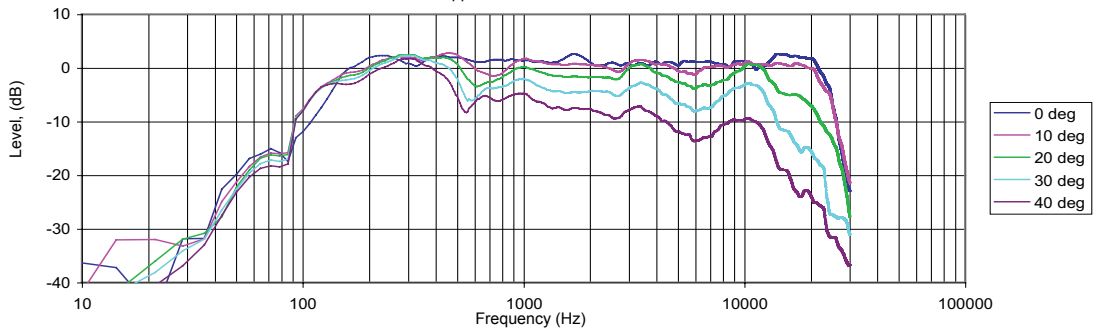
## PERFORMANCE MEASUREMENTS

Frequency Response: Processed Tri-amplified  
Horizontal Off-axis



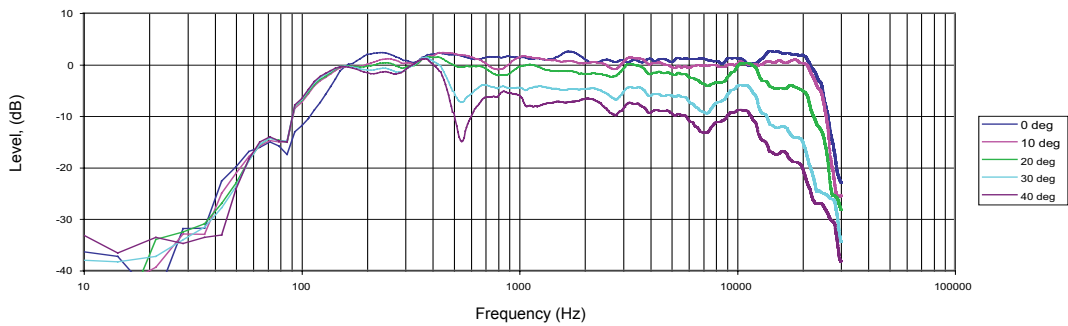
**HORIZONTAL OFF AXIS  
RESPONSE (TRI-AMP MODE)**

Frequency Response: Processed Tri-amplified  
Upper Vertical Off-axis



**VERTICAL UPPER  
OFF AXIS RESPONSE  
(TRI-AMP MODE)**

Frequency Response: Processed Tri-amplified  
Lower Vertical Off-axis



**VERTICAL LOWER  
OFF AXIS RESPONSE  
TRI-AMP MODE)**

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

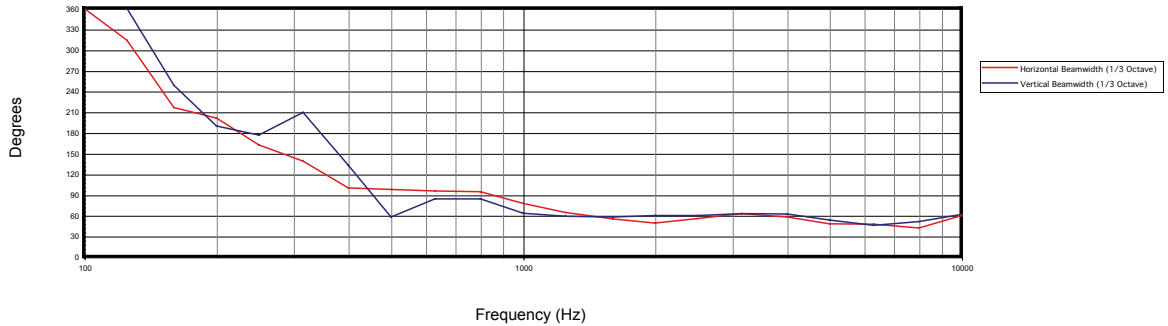
E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



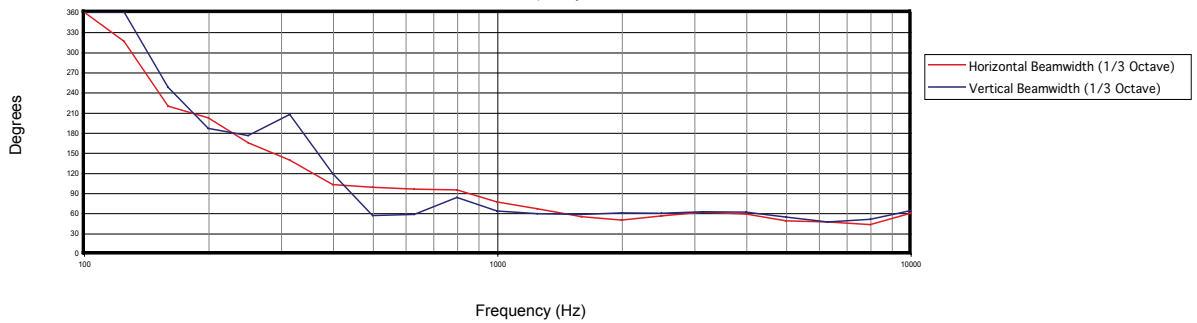
## PERFORMANCE MEASUREMENTS

Beamwidth vs Frequency



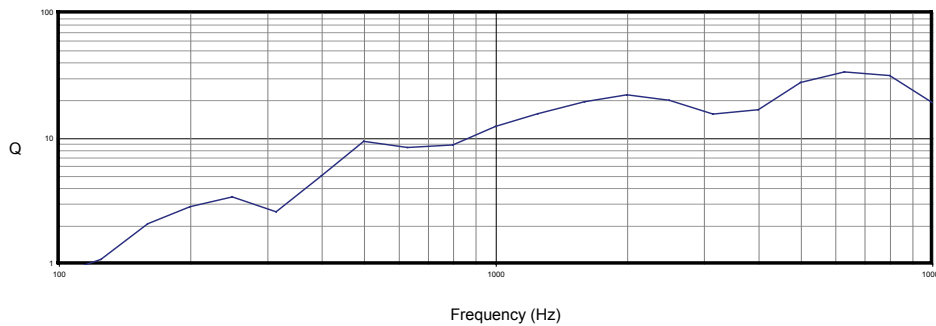
**BEAMWIDTH  
(BI-AMP MODE)**

Beamwidth vs Frequency



**BEAMWIDTH  
(TRI-AMP MODE)**

Q vs Frequency



**Q VS FREQUENCY  
(BI-AMP MODE)**

Tannoy (Direct UK)  
 TCGI (ROW sales)  
 TCGA (Americas sales)  
 Tannoy Middle East

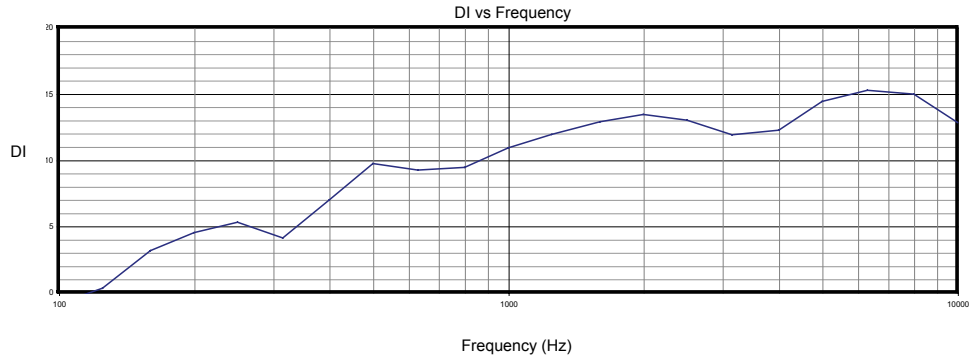
T: 00 44 (0) 1236 420199  
 T: 00 45 8742 7000  
 T: 00 1 (519) 745 1158  
 T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
 E: info@tcgroup-international.com  
 E: info@tcgroup-americas.com  
 E: enquiries@tannoy.com

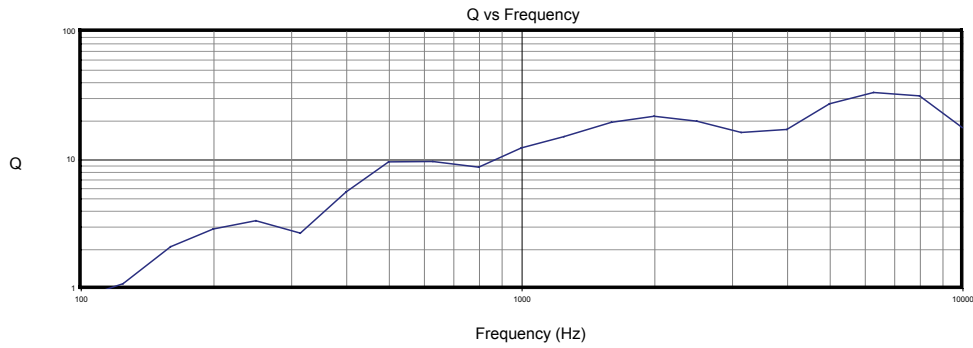
tannoy®.com



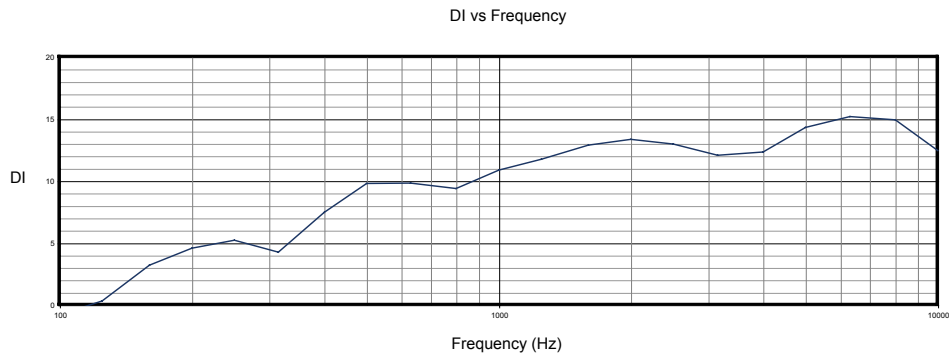
## PERFORMANCE MEASUREMENTS



**DIRECTIVITY INDEX  
(BI-AMP MODE)**



**Q VS FREQUENCY  
(TRI-AMP MODE)**



**DIRECTIVITY INDEX  
(TRI-AMP MODE)**

Tannoy (Direct UK)  
 TCGI (ROW sales)  
 TCGA (Americas sales)  
 Tannoy Middle East

T: 00 44 (0) 1236 420199  
 T: 00 45 8742 7000  
 T: 00 1 (519) 745 1158  
 T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
 E: info@tcgroup-international.com  
 E: info@tcgroup-americas.com  
 E: enquiries@tannoy.com

tannoy®.com

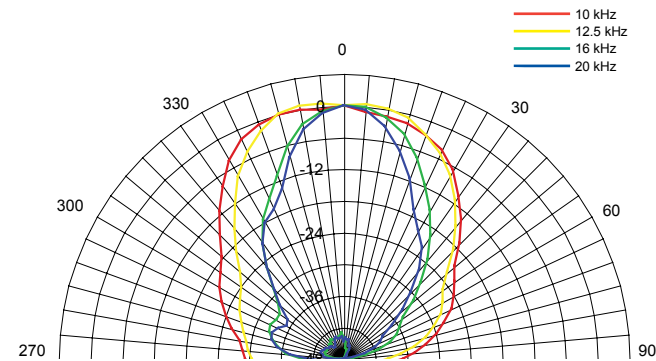
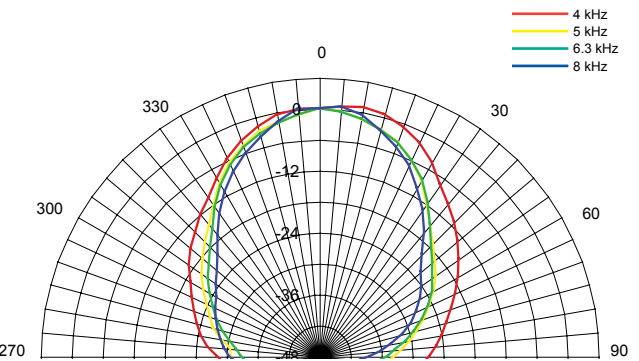
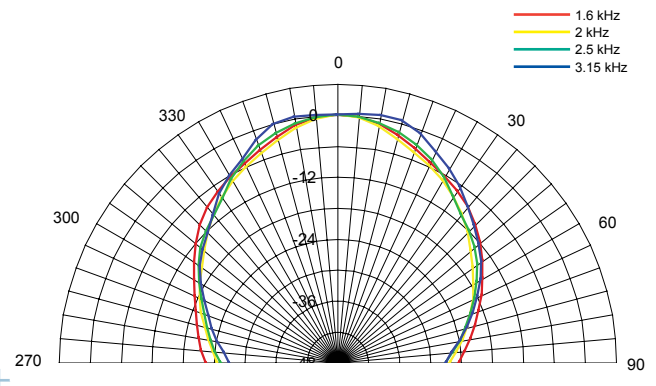
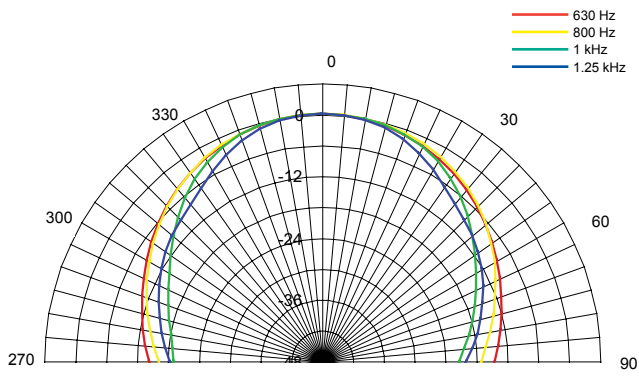
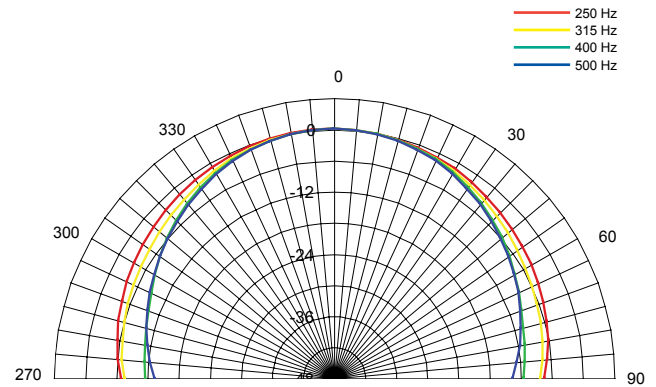
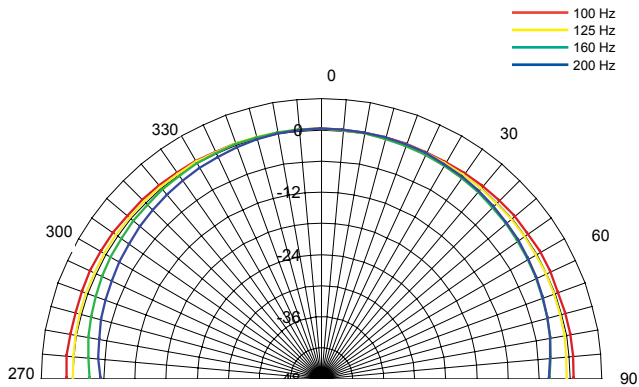




# VQ 60

# TANNOY®

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



Tannoy (Direct UK)  
 TCGI (ROW sales)  
 TCGA (Americas sales)  
 Tannoy Middle East

T: 00 44 (0) 1236 420199  
 T: 00 45 8742 7000  
 T: 00 1 (519) 745 1158  
 T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
 E: info@tcgroup-international.com  
 E: info@tcgroup-americas.com  
 E: enquiries@tannoy.com

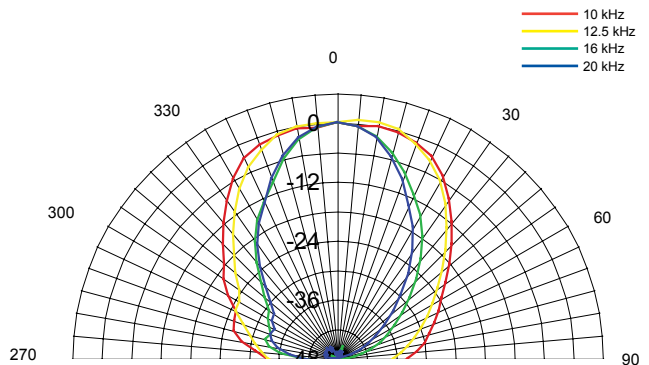
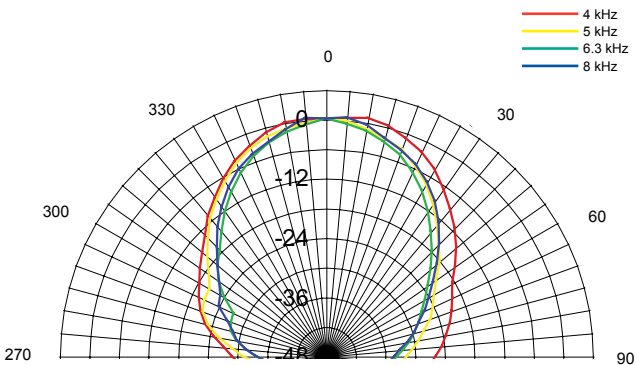
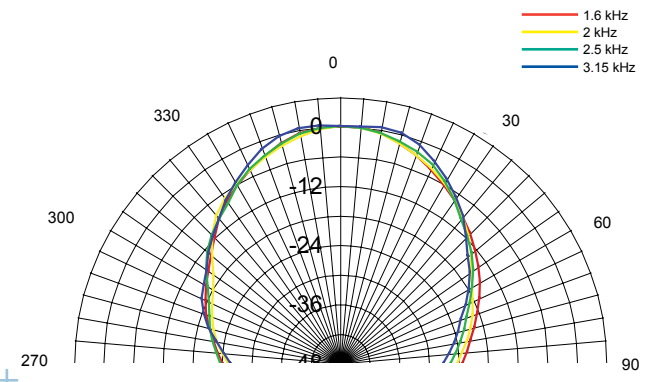
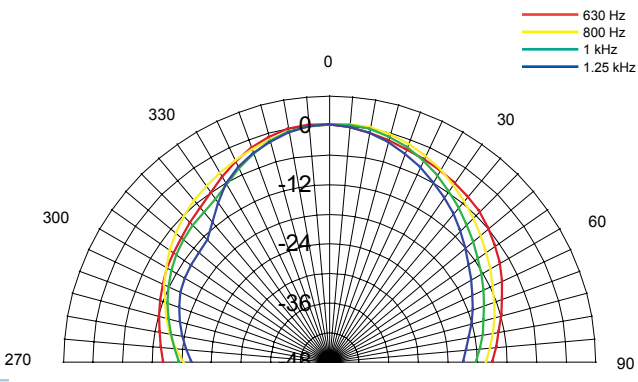
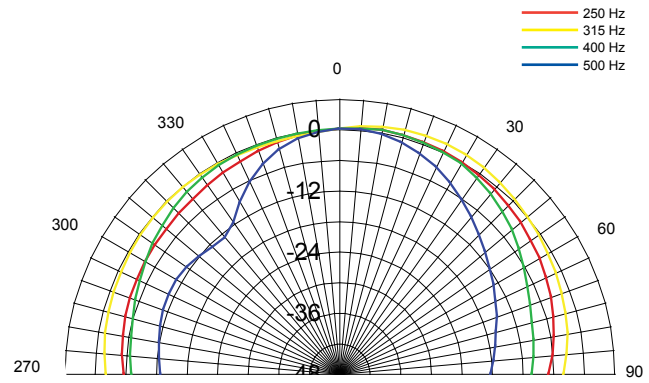
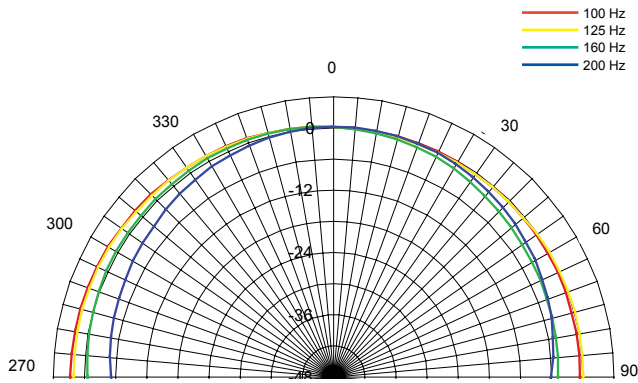
tannoy®.com



# VQ 60

# TANNOY®

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



Tannoy (Direct UK)  
 TCGI (ROW sales)  
 TCGA (Americas sales)  
 Tannoy Middle East

T: 00 44 (0) 1236 420199  
 T: 00 45 8742 7000  
 T: 00 1 (519) 745 1158  
 T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
 E: info@tcgroup-international.com  
 E: info@tcgroup-americas.com  
 E: enquiries@tannoy.com

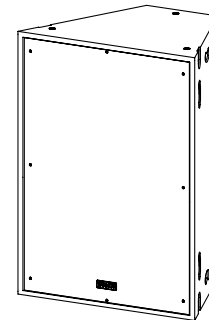
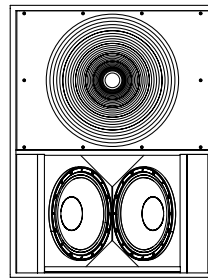
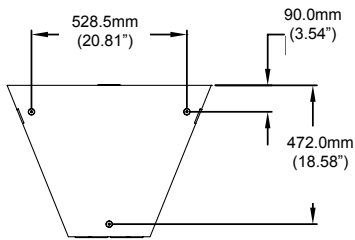
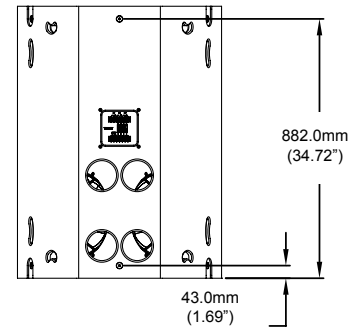
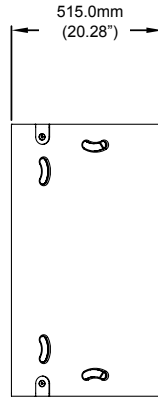
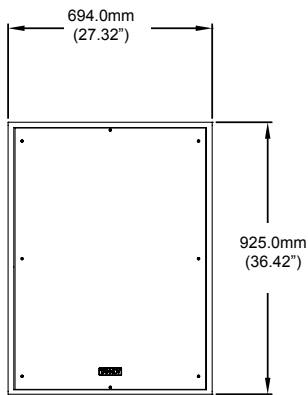
tannoy®.com



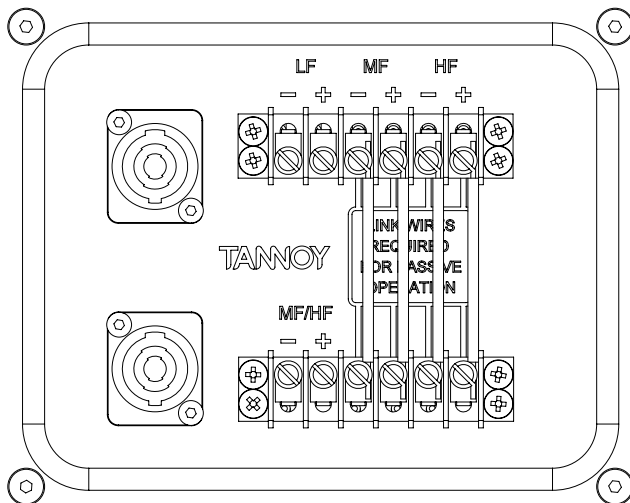
# VQ 60

# TANNOY®

## DIMENSIONAL SKETCHES



## INPUT PANEL



Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

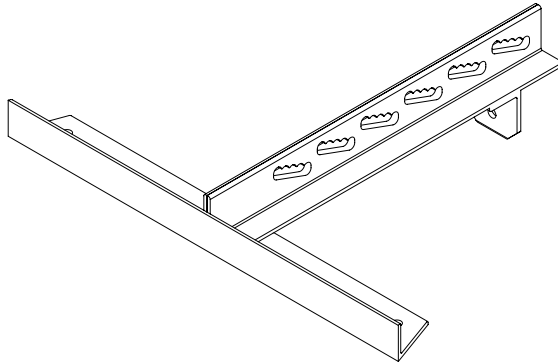
T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

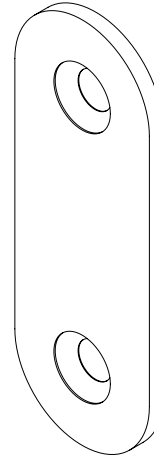
# tannoy®.com



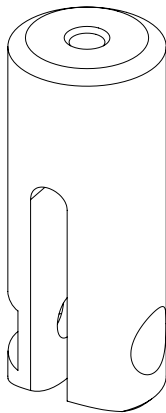
## OPTIONAL ACCESSORIES



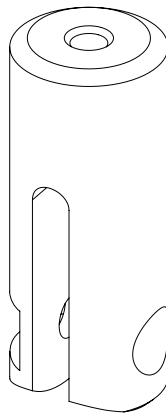
VQ FLYING BRACKET  
(SINGLE POINT HANGING BRACKET)



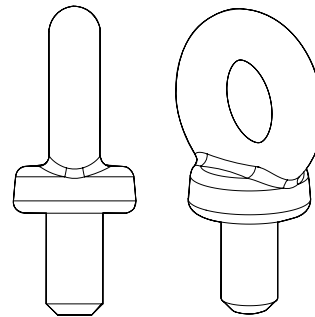
VQ LINK (LINK PLATE)



VQ ROD END 12mm



VQ ROD END 1/2in UNC



VEB FORGED EYEBOLT

### Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 5250	VQ Flying Bracket (Single Point Hanging Bracket)	BLACK	1
7900 1055	VQ Link (Link Plate)	BLACK	3
8001 5260	VQ Rod End 12	BLACK	1
8001 5261	VQ Rod End 1/2in UNC	BLACK	1
8001 2820	VEB Forged Eyebolt	-	3

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



## Architectural specifications

The loudspeaker shall consist of a Dual Concentric™ Compression driver with a 3.5" Midrange voice coil and a 2" High Frequency voice coil, both mounted in a common subsystem with a common 2" exit. This Dual Concentric™ compression driver shall be coupled to a PSW™ (Point Source Waveguide) constant directivity horn operating over the frequency range of 450Hz to 23kHz. The low frequency section consists of two 12" (300mm) woofers, and shall be mounted in a semi-horn loaded enclosure to provide significant off axis attenuation below 450Hz. The loudspeaker shall be user configurable for either Bi-Amp or Tri-Amp operation via the rear input panel. The loudspeaker shall be trapezoidal in shape.

Performance of the loudspeaker, using the recommended electronic control shall meet or exceed the following criteria:

The Low Frequency section shall produce a sound pressure level of 105dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 141dB SPL on axis at 1 meter. In Bi-amp mode the Mid/High section shall produce a sound pressure level of 115dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 144dB SPL on axis at 1 meter. In Tri-amp mode the Mid frequency section shall produce a sound pressure level of 115dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 144dB SPL on axis at 1 meter. The High Frequency section shall produce a sound pressure level of 115dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 141 dB SPL on axis at 1 meter. The Low Frequency section shall handle 1000 Watts of amplifier power and shall have a nominal impedance of 4 Ohms. In Bi-amp mode the Mid/High section shall handle 400 Watts of amplifier power and shall have a nominal impedance of 8 Ohms. In Tri-amp mode the Mid frequency section shall handle 400 Watts of amplifier power and shall have a nominal impedance of 8 Ohms. The High Frequency section shall handle 180 Watts of amplifier power and shall have a nominal impedance of 8 Ohms. The dispersion of the loudspeaker shall be 60 degrees conical (-6dB). The enclosure shall be of birch plywood construction and internally braced. The enclosure shall be fitted with eight integral carrying handles, and twelve M10 inserts for flying hardware. The enclosure shall not exceed the following dimensions (H x W x D): 925mm x 694mm x 515mm (36.42" x 27.32" x 20.28").

The loudspeaker shall be the Tannoy...VQ 60.



# VQ 60

# TANNOY®

## NOTES

Grid area for notes.

Horizontal lines for notes.

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com



# VQ 60

# TANNOY®

## NOTES

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

**tannoy®.com**



# VQ 60

# TANNOY®

## NOTES

Tannoy (Direct UK)  
TCGI (ROW sales)  
TCGA (Americas sales)  
Tannoy Middle East

T: 00 44 (0) 1236 420199  
T: 00 45 8742 7000  
T: 00 1 (519) 745 1158  
T: 00 971 (04) 4401208

E: enquiries@tannoy.com  
E: info@tcgroup-international.com  
E: info@tcgroup-americas.com  
E: enquiries@tannoy.com

tannoy®.com