

## Touring Speakers

# BERLIN TBV123

Arrayable 2 Way 12" Constant Curvature Loudspeaker with Dendritic Waveguide for Touring, Portable and Installation Applications



- 2 way full range loudspeaker for touring, portable and installation applications
- Constant curvature Dendritic waveguide with 100° H x 15° V dispersion for seamless array coverage
- 600 Watts continuous, 2,400 Watts peak power
- Ideal for FOH, side and drum fill applications
- Carbon fibre loaded 12" neodymium low frequency driver with inside/outside wound voice coils
- Dual aluminium dome 1" neodymium motor compression drivers
- Switchable passive/bi-amp operation for flexibility of use
- 18 mm (¾") plywood enclosure with hard wearing semi matt black paint finish
- Integral suspension hardware for efficient array configuration and aiming
- Multiple M10 mount points allow eyebolt suspension in any orientation
- Dual angle pole mount for accurate audience coverage
- Rugged powder coated perforated steel mesh grille

The 2-way full range TBV123 is an arrayable, switchable passive/bi-amplified, 2,400 Watt 12" loudspeaker system that is ideally suited for touring, portable, and installed sound reinforcement applications. Designed to work in conjunction with LAKE DSP and LAB GRUPPEN amplification, the TBV123 provides optimal performance for FOH, offstage fill, stereo in-fill or distributed fill applications in a wide range of venues – including nightclubs, concert halls, houses of worship, and more.



### Custom-Engineered Drivers

TURBOSOUND is recognised the world over for designing and building some of the most iconic loudspeakers and subwoofers. We take meticulous care and pride in maintaining that reputation by utilising only drivers designed specifically for each application – it's what sets us apart from the competition. The TBV123 loudspeaker features a carbon fibre loaded 12" neodymium low frequency driver, and dual aluminium dome 1" neodymium motor compression drivers mounted on a 100° horizontal by 15° vertical dispersion constant curvature Dendritic waveguide, which maximises the direct sound field while reducing reverberant energy.

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- Durable handles for easy lifting and carrying
- Neutrik speakON\* NL4 connectors for reliable long life operation
- 3-Year Warranty Program\*
- Designed and engineered in the U.K.

### Plywood Construction

Finished in a highly durable semi matt black paint, the cabinet is constructed from 18 mm (¾") plywood with a rugged powder coated perforated steel mesh grille backed with reticulated foam, a convenient dual angle 35 mm pole/speaker stand mount for accurate audience coverage, and a durable handle for easy transport. The TBV123 includes integral suspension hardware for efficient array configuration and aiming, plus multiple internal M10 mount points that allow eyebolt suspension in any orientation.



### Touring-Grade Performance

Designed to provide exceptional performance for travelling musicians, houses of worship, banquet facilities, night clubs – and a host of other venues, the 2,400-Watt TBV123 puts touring-grade sound quality into a scalable loudspeaker system that is supremely portable and versatile.

\*All third-party trademarks are the property of their respective owners. Their use neither constitutes a claim of the trademark nor affiliation of the trademark owners with MUSIC Group. Product names are mentioned solely as a reference for compatibility, effects and/or components. Warranty details can be found at [music-group.com](http://music-group.com).

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## You Are Covered

We always strive to provide the best possible Customer Experience. Our products are made in our own [MUSIC Group](#) factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous [5-Year Warranty program](#).

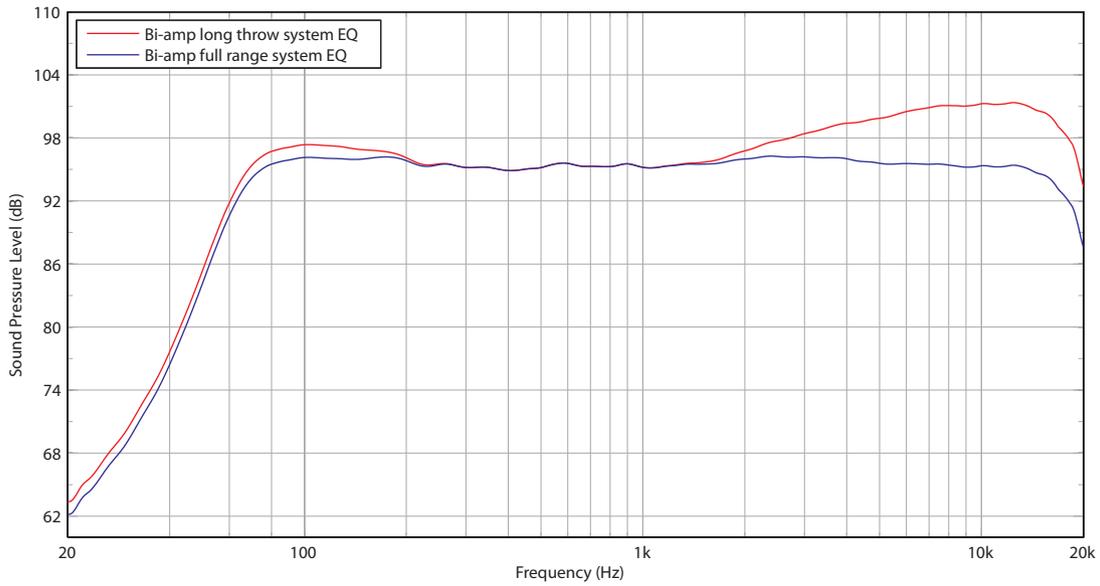


## Touring Speakers

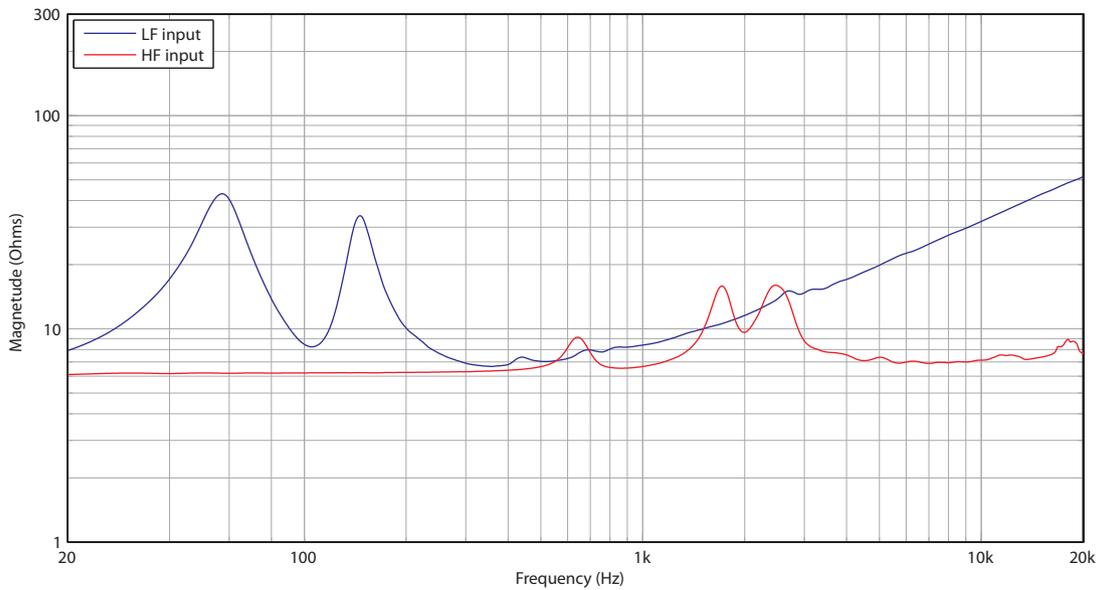
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### Frequency Response Sensitivity 1 W / 1 m



### Impedance

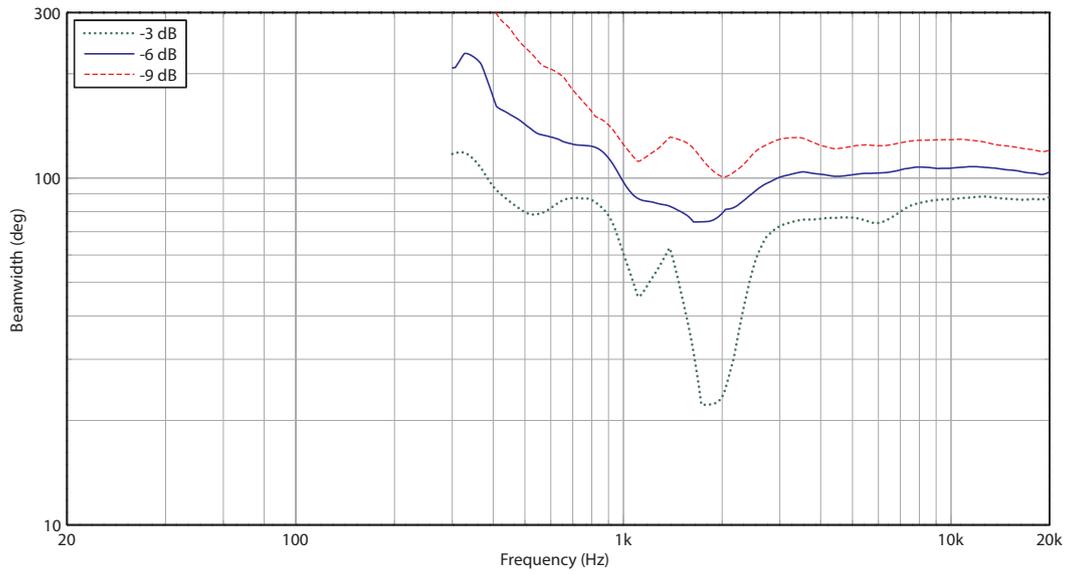


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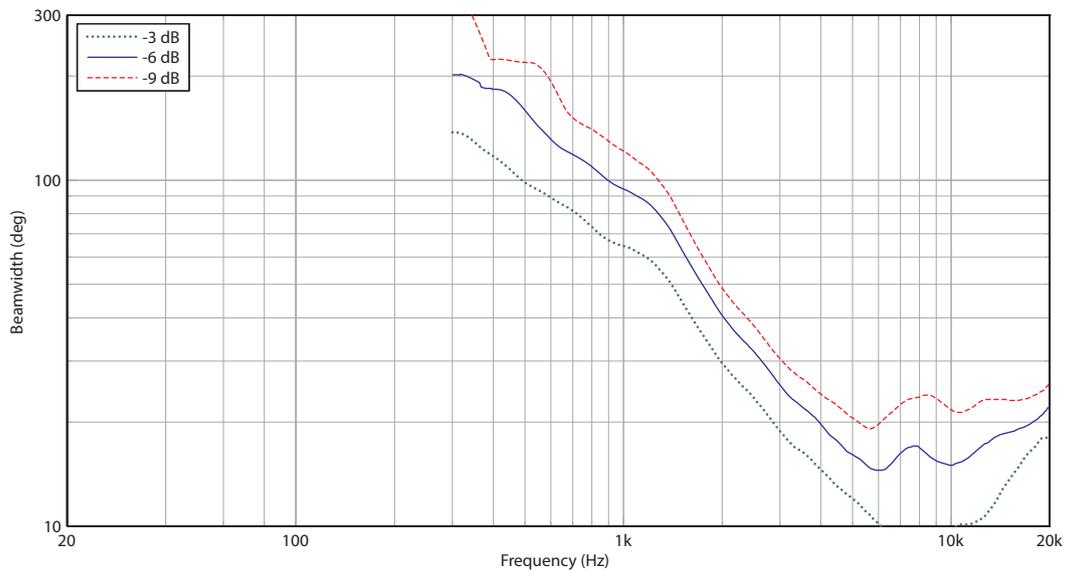
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## Horizontal Beamwidth



## Vertical Beamwidth

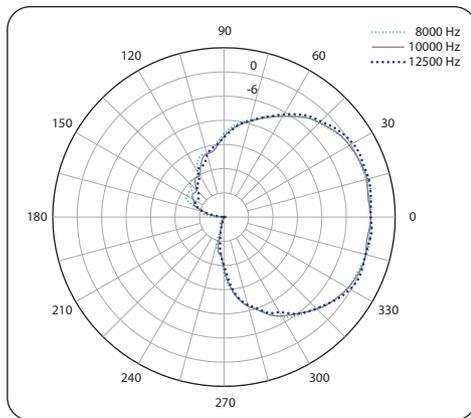
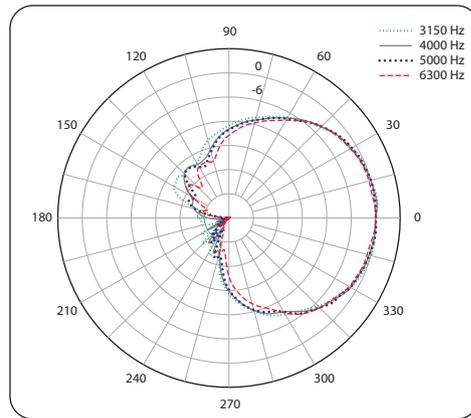
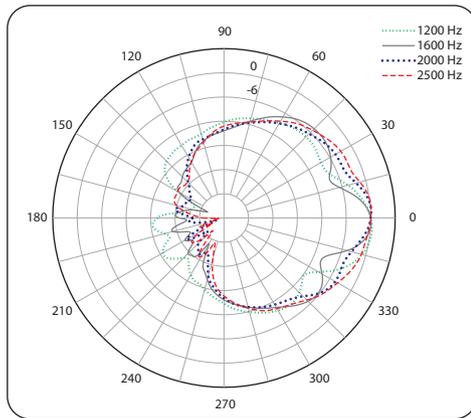
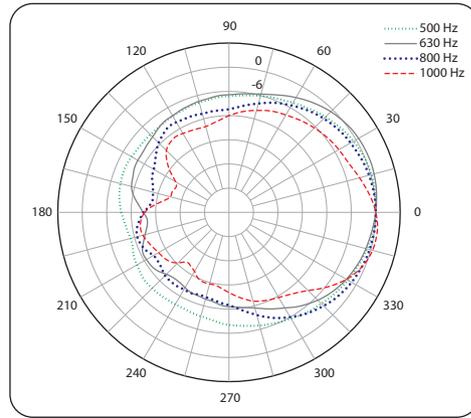
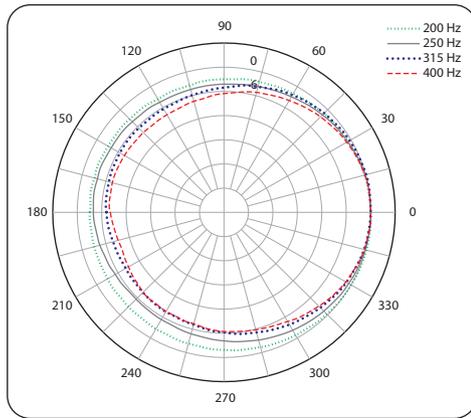


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## Horizontal Polar Plots

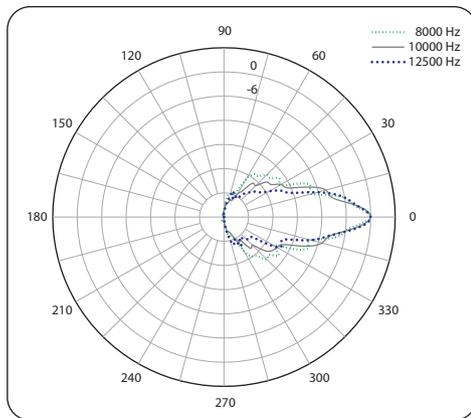
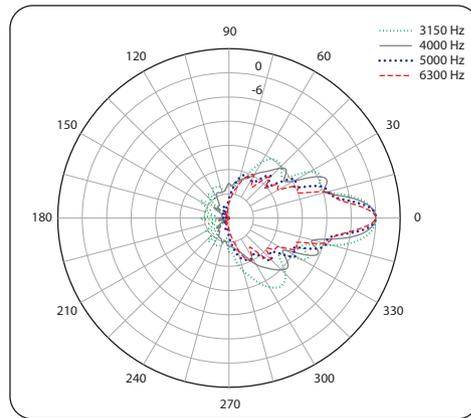
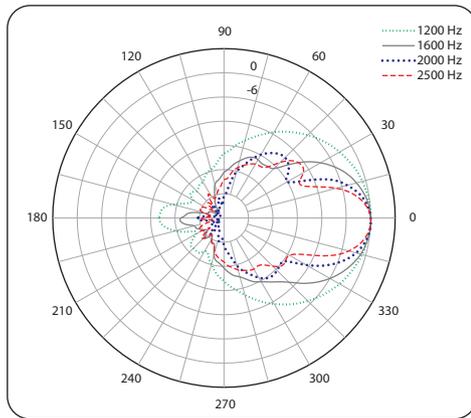
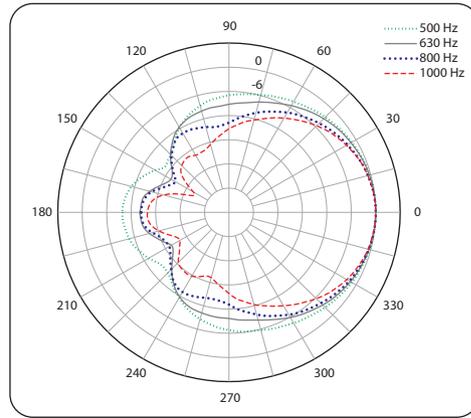
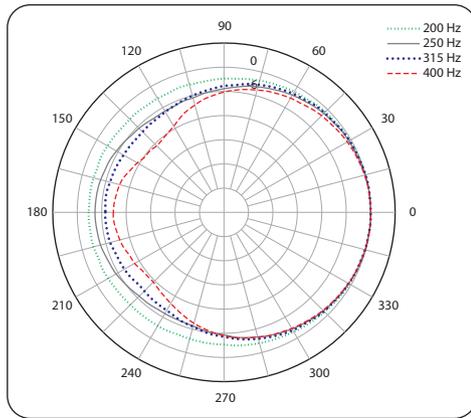


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### Vertical Polar Plots

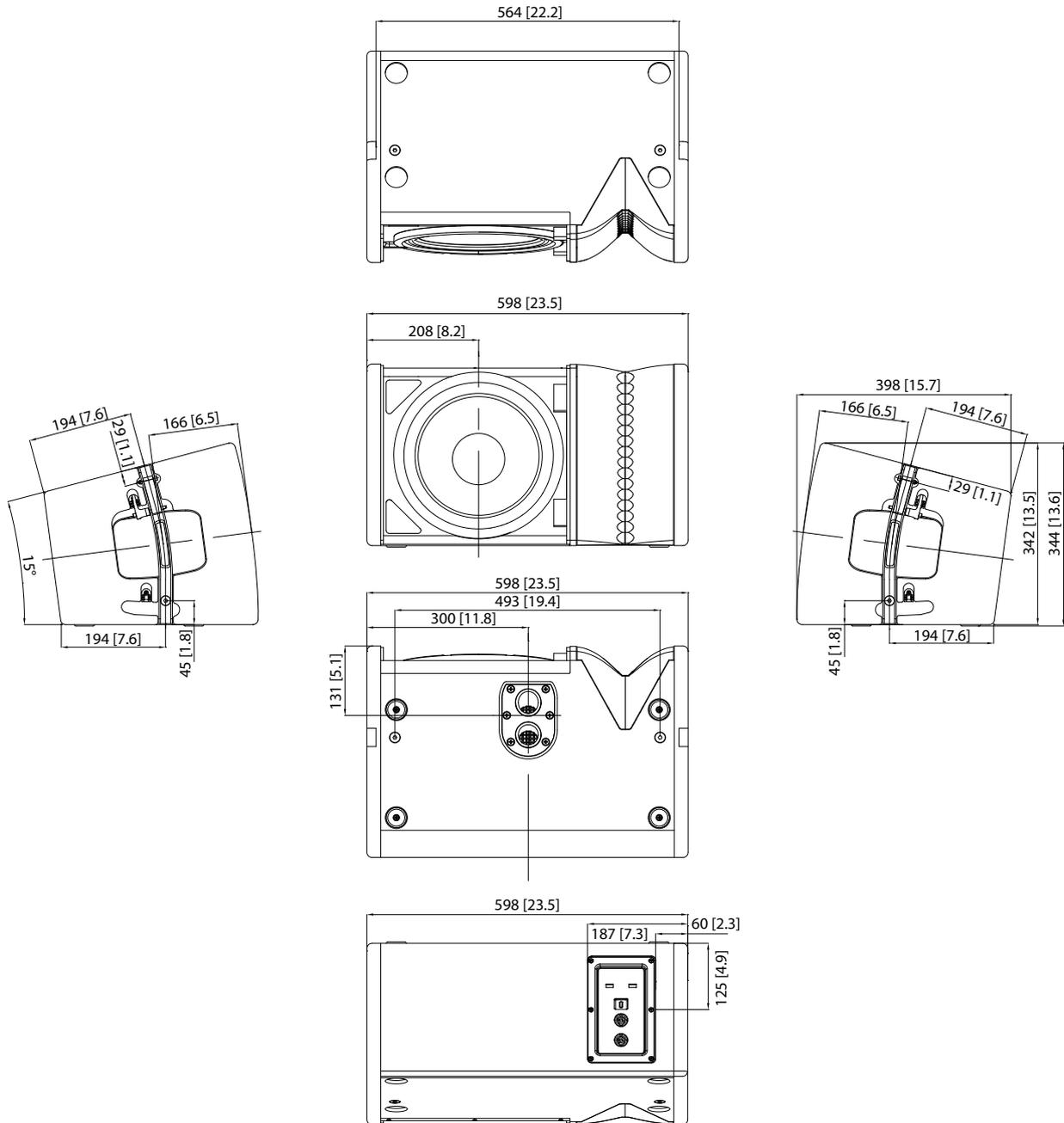


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## Dimensions



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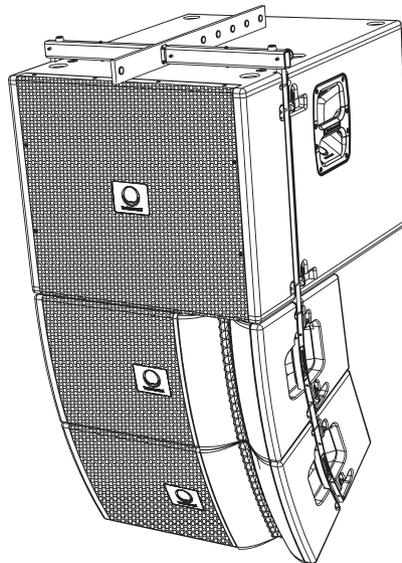
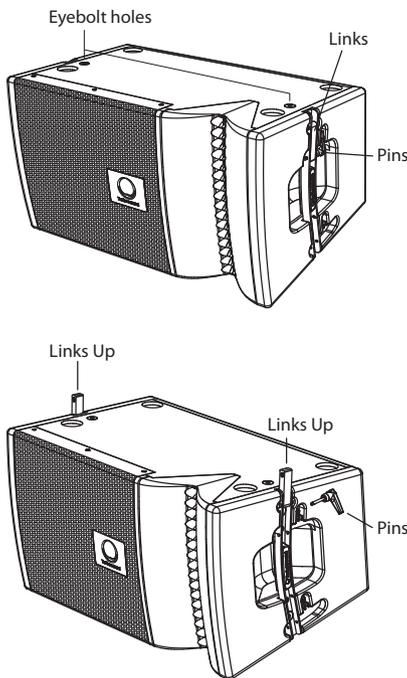
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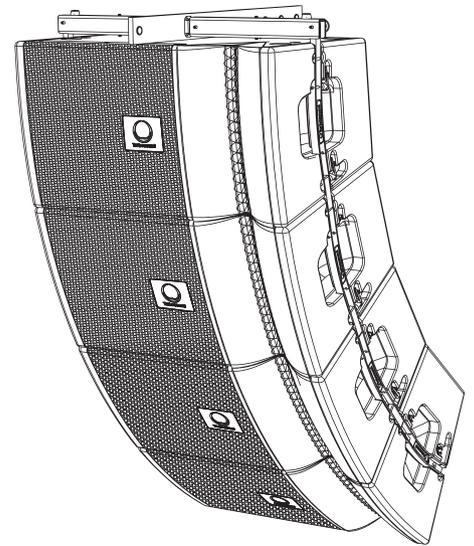
## Mounting and Rigging

**⚠ Safety Warning:** Only authorised and certified personnel shall design and install suspended or ground stack configurations, following the instructions and procedures in the TBV123-FB rigging manual supplied with the TBV123-FB flybar, or downloaded from [turbosound.com](http://turbosound.com). Failure to follow these instructions may lead to death or permanent injury. For maximum array sizes, weights and working load limits, please consult the TBV123-FB rigging manual.

The TBV123 cabinet has two retractable mounting links at the top, that allow it to be attached to a TBV123-FB flybar, or to another TBV123 cabinet, or to a TBV118L subwoofer. Rigging pins are provided to secure the TBV123 cabinets, TBV118L subwoofer, and TBV123-FB flybar together. Threaded eyebolt holes and pole mount holes are also present for more mounting options.



Mixed array with a TBV123-FB flybar,  
TBV118L subwoofer, and 2 TBV123 cabinets



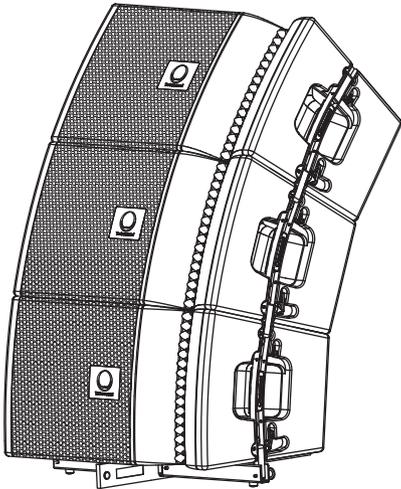
An array of 4 TBV123 cabinets with  
a TBV123-FB flybar

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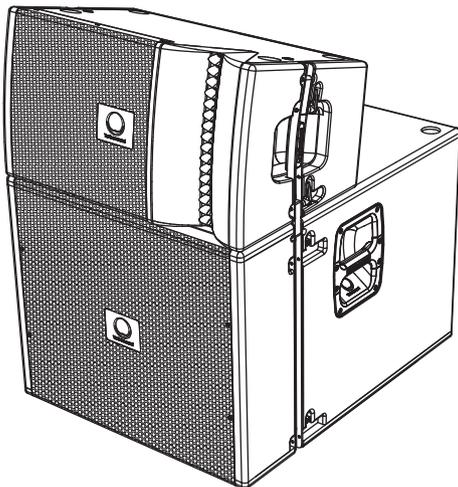
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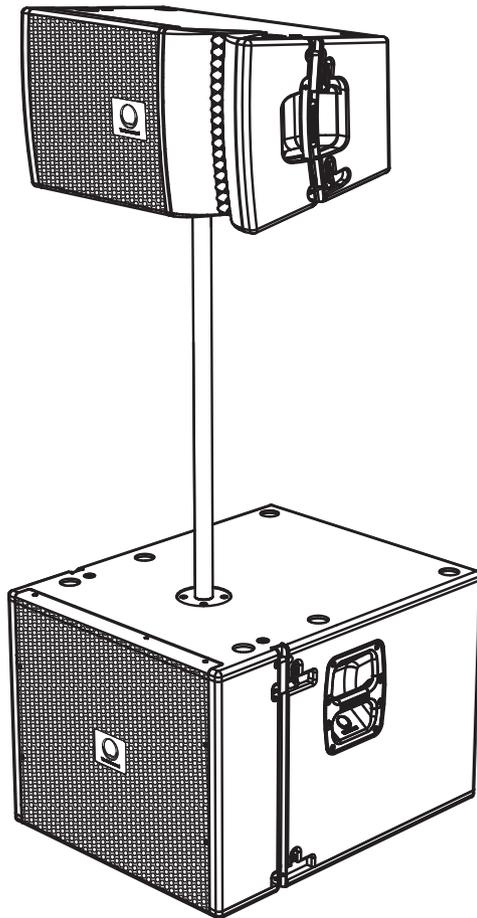
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TBV123 array ground stack with an inverted TBV123-FB flybar



TBV123 ground stack with a TBV118L subwoofer



TBV123 cabinet pole-mounted with a TBV118L subwoofer

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## Technical Specifications

### System

Frequency Response	65 Hz – 20 kHz $\pm$ 3 dB 53 Hz – 20 kHz -10 dB
Nominal Dispersion	100° H x 15° V @ -6 dB points
Directivity Factor (Q)	31.4
Directivity Index (DI)	15
Power Handling (IEC)	
Passive	600 W continuous, 2400 W peak
Bi-amp	LF: 540 W continuous, 2160 W peak HF: 60 W continuous, 240 W peak
Sensitivity	
Passive	97 dB (1W @ 1m)
Bi-Amp	LF: 97 dB (1W @ 1m) HF: 106 dB (1W @ 1m)
Maximum SPL	
Passive	125 dB continuous, 131 dB peak
Bi-Amp	LF: 125 dB continuous, 131 dB peak HF: 124 dB continuous, 130 dB peak
Impedance	
Passive	8 $\Omega$
Bi-Amp	LF: 8 $\Omega$ HF: 8 $\Omega$
Crossover Type	Passive / bi-amp switchable
Components	1 x 12" (316 mm) LF driver 2 x 1" (25.4 mm) HF compression driver

### Enclosure

Connectors	2 x Neutrik speakON* NL4
Wiring	
Passive	Pins 1+ / 1- input, pins 2+ / 2- link
Bi-Amp	Pins 1+ / 1- LF, pins 2+ / 2- HF
Dimensions (H x W x D)	344 x 598 x 398 mm (13.6 x 23.5 x 15.7")
Net Weight	22.0 kg (48.5 lbs)
Construction	18 mm (¾") plywood
Finish	Semi matt black paint
Grille	Powder coated perforated steel
Suspension hardware	Integral Suspension System and M10 x 4 points

### Accessories

TBV123-FB	Fly Bar
TBV123-RC2	Road case for 2x TBV123
TS-PC12-3	Protective cover for 1x TBV123
TPOLE 60-20	60 cm Lightweight Steel Pole with M20 Screw Attachment
TPOLE 90-20	90 cm Lightweight Steel Pole with M20 Screw Attachment
TPOLE 120-20	120 cm Lightweight Steel Pole with M20 Screw Attachment

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## Architecture & Engineering Specifications

The speaker shall be of the full range, two-way switchable bi-amp/passive type consisting of one 12" (316 mm) LF driver and two 1" (25.4 mm) HF compression drivers. Performance specifications of a typical production unit shall meet or exceed the following: frequency response, measured with swept sine wave input, shall be flat within  $\pm 3$  dB from 65 Hz to 20 kHz and within -10 dB from 53 Hz to 20 kHz. Nominal dispersion, at -6 dB points, shall average  $100^\circ$  H x  $15^\circ$  V. Nominal impedance shall be HF: 8 Ohms, LF: 8 Ohms; passive: 8 Ohms. Power handling shall be HF: 60 Watts continuous, 240 Watts peak, LF: 540 Watts continuous, 2,160 Watts peak; passive: 600 Watts continuous, 2,400 Watts peak. Sensitivity, measured on axis, mean averaged over stated bandwidth, shall be 97 dB, 1 Watt @ 1 metre. Maximum SPL (peak), measured at 1 metre with music program at stated amplifier input, shall be HF: 130 dB, LF: 131 dB; passive: 131 dB. Dimensions: 344 mm high x 598 mm wide x 398 mm deep (13.6 x 23.5 x 15.7"). Net weight: 22.0 kg (48.5 lbs). The loudspeaker system shall be the TURBOSOUND TBV123. No other loudspeaker shall be acceptable unless submitted data from an independent test laboratory verifies that the above combined performance / size specifications are equaled or exceeded.

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