



# Beta Three TLA-101 Line Array Loudspeaker for Medium Scale Sound Reinforcement User Manual

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Beta Three TLA-101 Line Array Loudspeaker for Medium Scale Sound  
Reinforcement User Manual



# TLA-101



**USER MANUAL**  
ED-B3-MA-081031-001

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## FEATURES

TLA-101 is a line array loudspeaker for medium scale sound reinforcement.

Using the TLF-101 Flying Frame it can be flown in vertical columns with up to 12 cabinets giving a 90 constant directivity dispersion pattern in the horizontal plane.

The TLA101 is a 2-way design housing 2×10" neodymium kapton LF drivers and two 2 × 4"× 1" (101.6 × 25.4)mm neodymium Kapton compression drivers. The cylindrical wave segments of each cabinet will couple without gaps and sum up coherently. Splay angles between adjacent cabinets can be set in the range from 0 to 5 in half degree steps.

TLA-101 system is two channels of amplifier UA2000 or UA2002(with active crossover provided by ΣC-2600 between LF/MF and HF section of the 10" speaker). It can also be driven by AP-4U or AM-4U with analog or digital control cards.

All components are arranged symmetrically around the centre axis of the cabinet to produce a perfect symmetrical dispersion pattern. This setup allows a very smooth crossover design with well defined overlap of adjacent frequency bands resulting in a very consistent and accurate horizontal dispersion. Due to dipolar arrangement of the low drivers the nominal dispersion of 90 is maintained down to 200Hz.

The frequency response of TLA-101 extends from 100 Hz-19kHz.

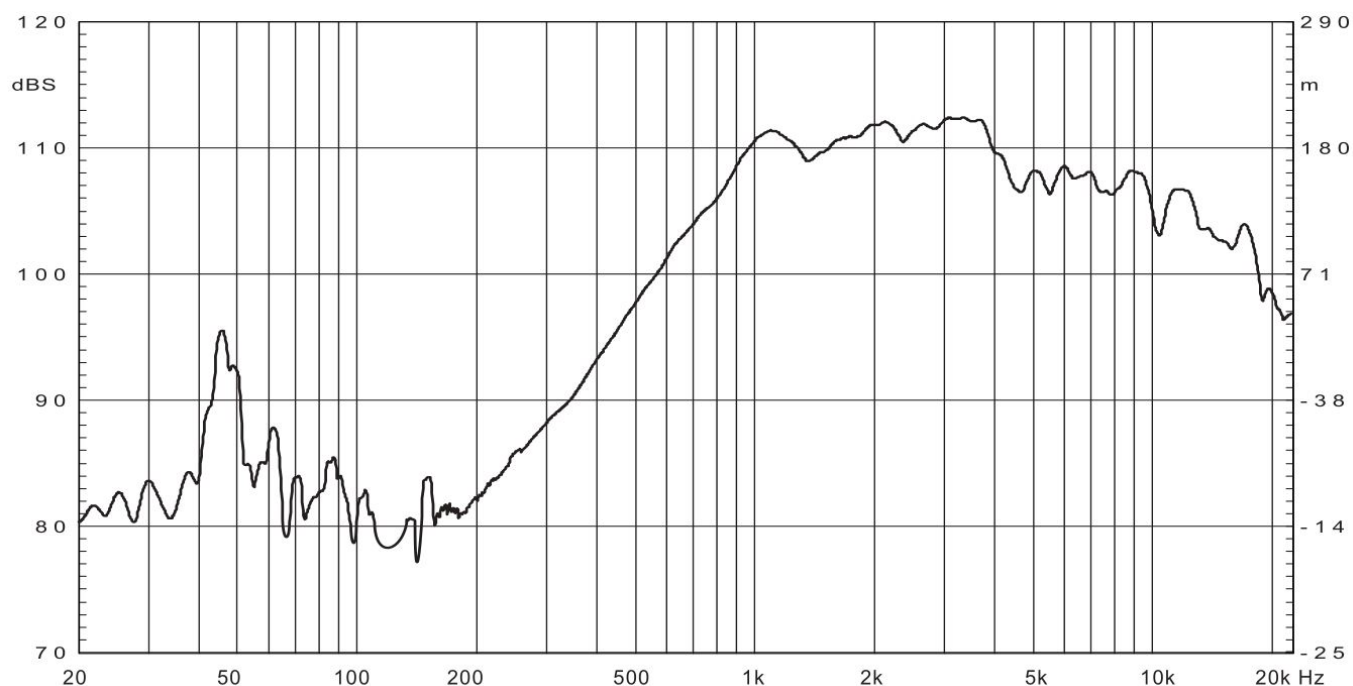
The TLA-101 cabinet is made of plywood and has an impact and weather resistant polyurethane finish.

The front of the loudspeaker cabinet is protected by a rigid metal grill. There are two handles designed on the side panels.

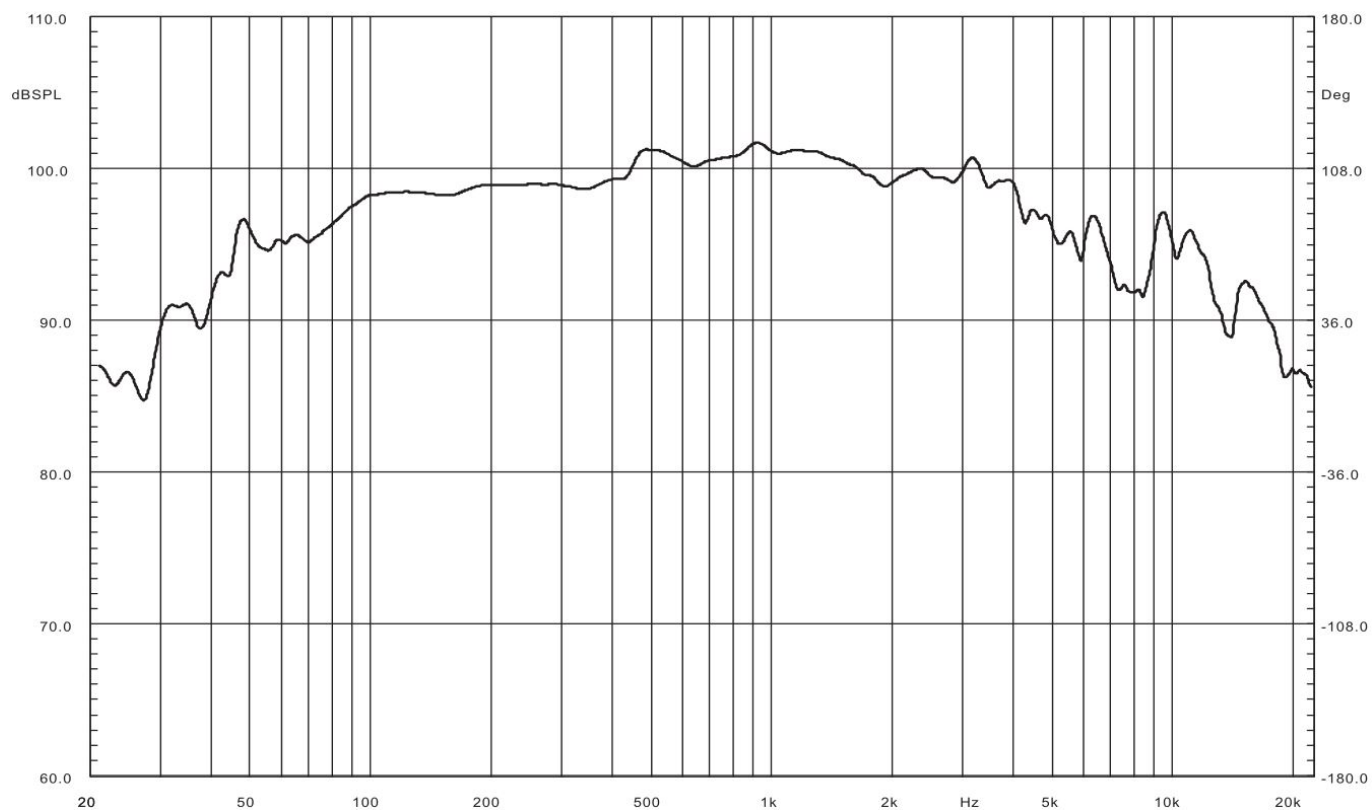
## SPECIFICATION

Transducers:	LF:10"×2 HF: $\varnothing$ 44mm×2
Frequency Response(-3dB):	LF:100Hz-4kHz HF:1kHz-19kHz
Sensitivity(1m/1W):	LF:104dB HF:110dB
Dispersion(H×V):	120°×30°
Rated Power(RMS):	LF:400W HF:70W
Rated Impedance:	LF:8 $\Omega$ HF:8 $\Omega$
DC impedance:	LF:5.2 $\Omega$ HF:6.3 $\Omega$
THD:	<3%
Input Connectors:	NL4×2 LF:1+ 1- HF:2+2-
Net Weight(Pcs):	22.5kg
Gross Weight(Pcs):	25.5kg
Dimensions (W×D×H):	800×503×300mm
Packing Dimensions(W×D×H):	890×585×390mm

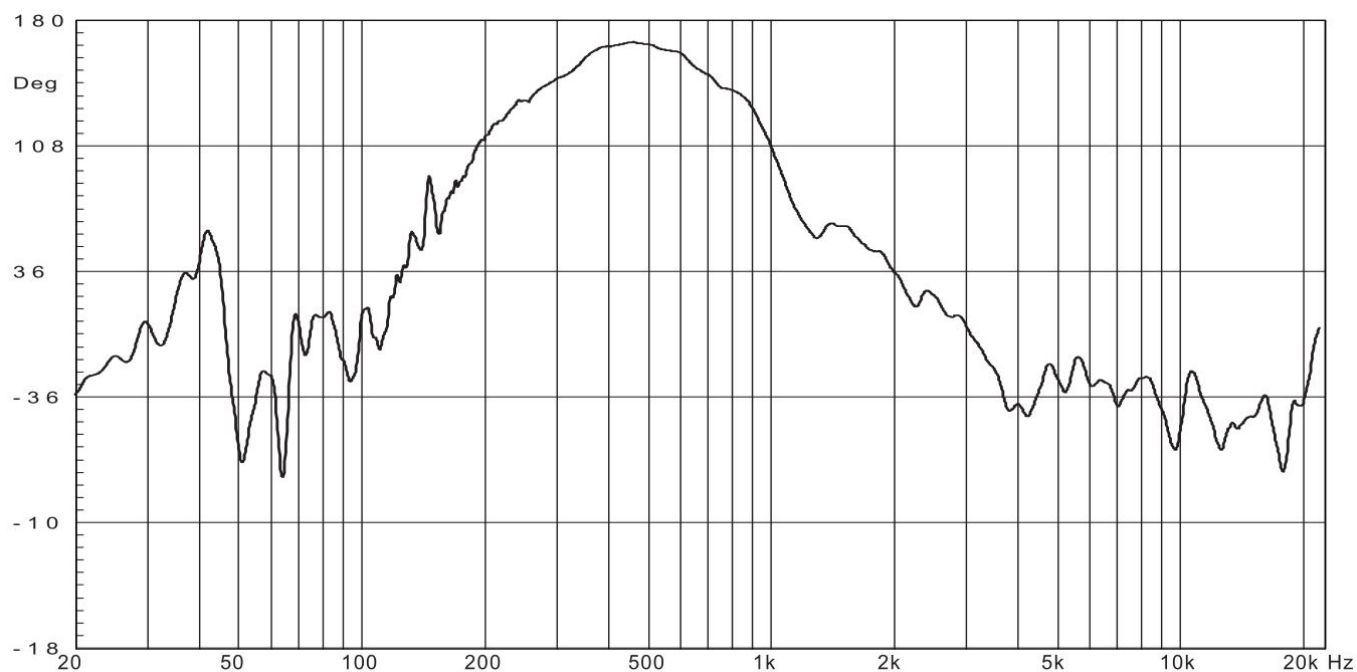
## FREQUENCY RESPONSE-HF



## FREQUENCY RESPONSE-LF



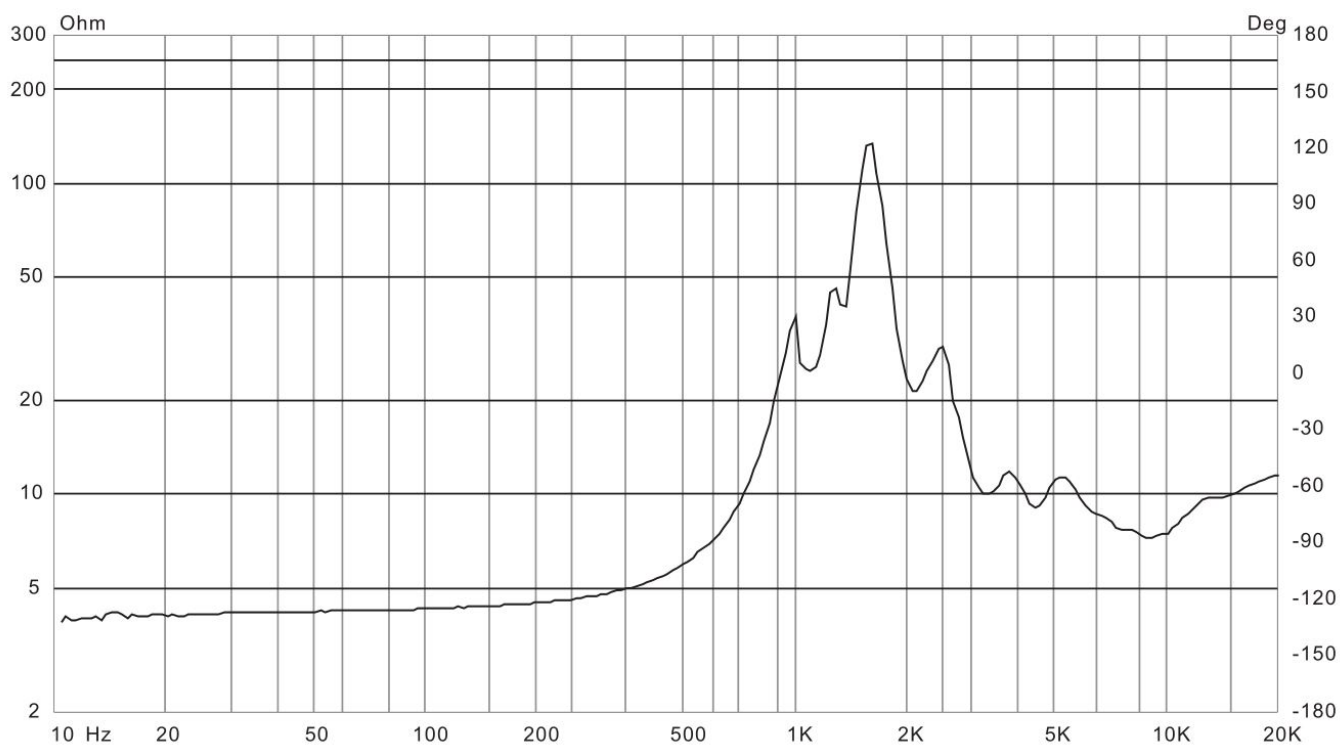
## PHASE RESPONSE-HF



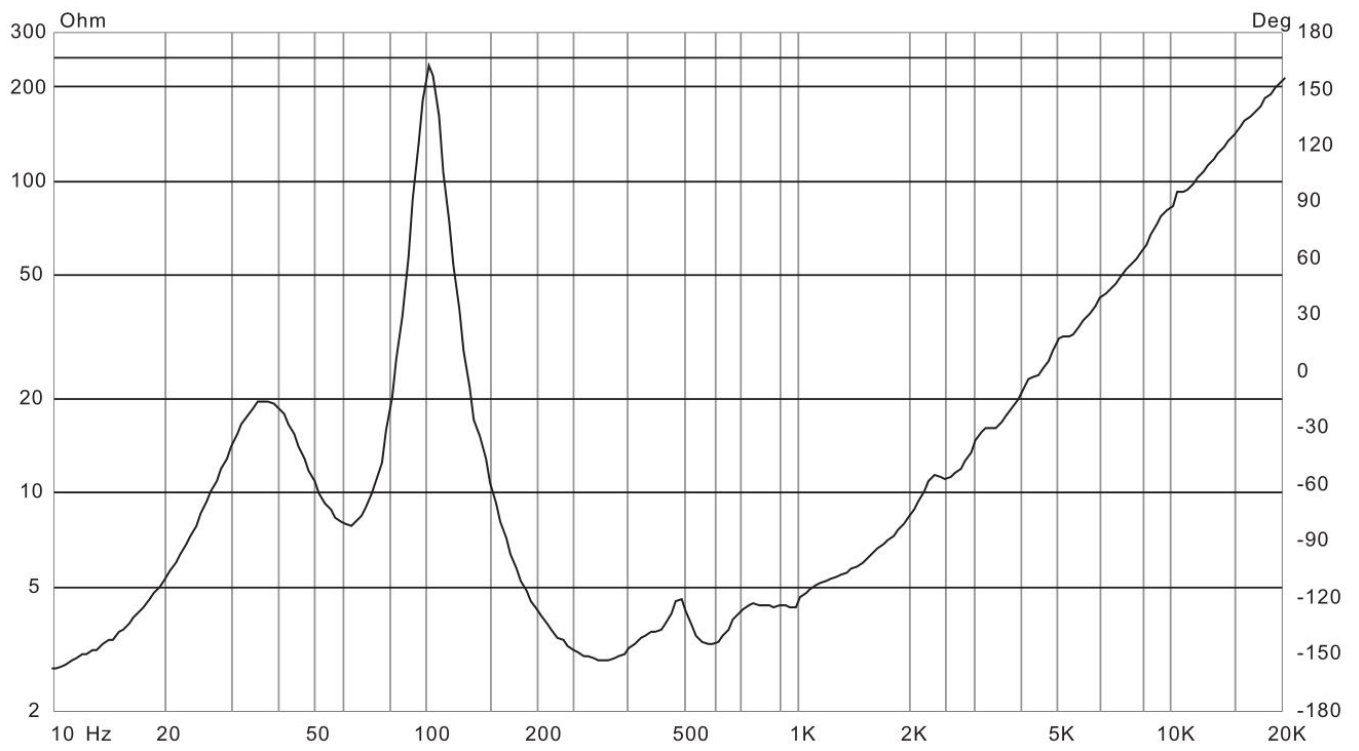
## PHASE RESPONSE-LF



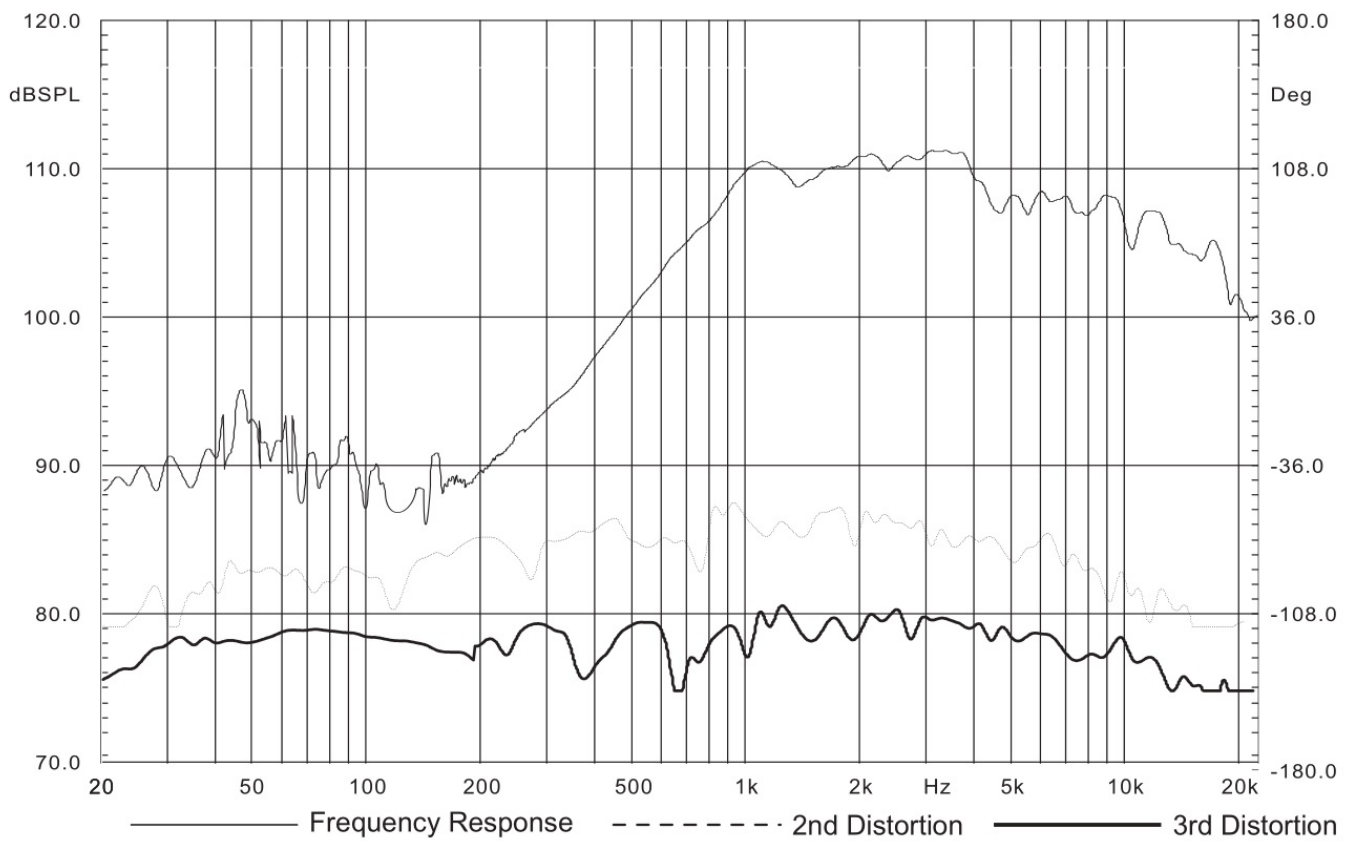
### IMPEDANCE RESPONSE-HF



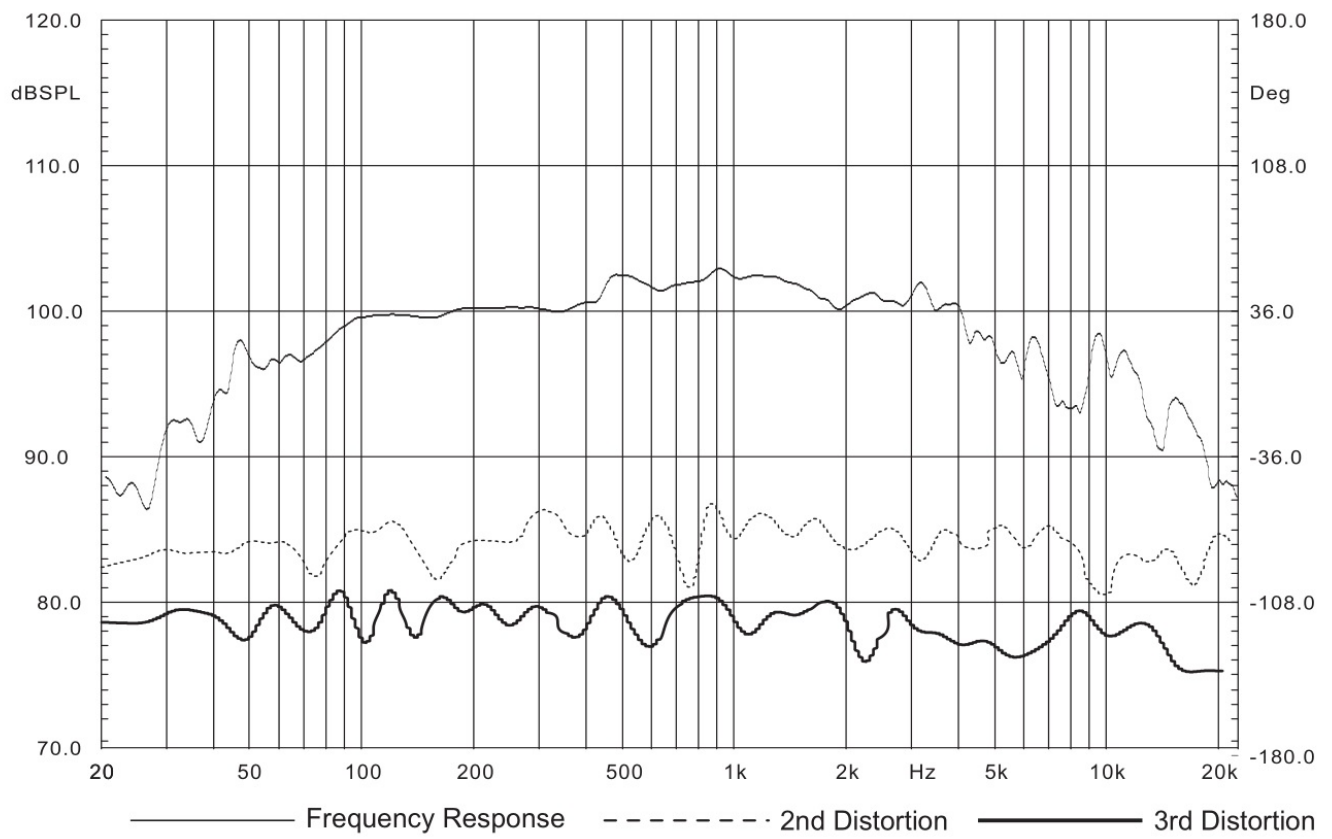
### IMPEDANCE RESPONSE-LF



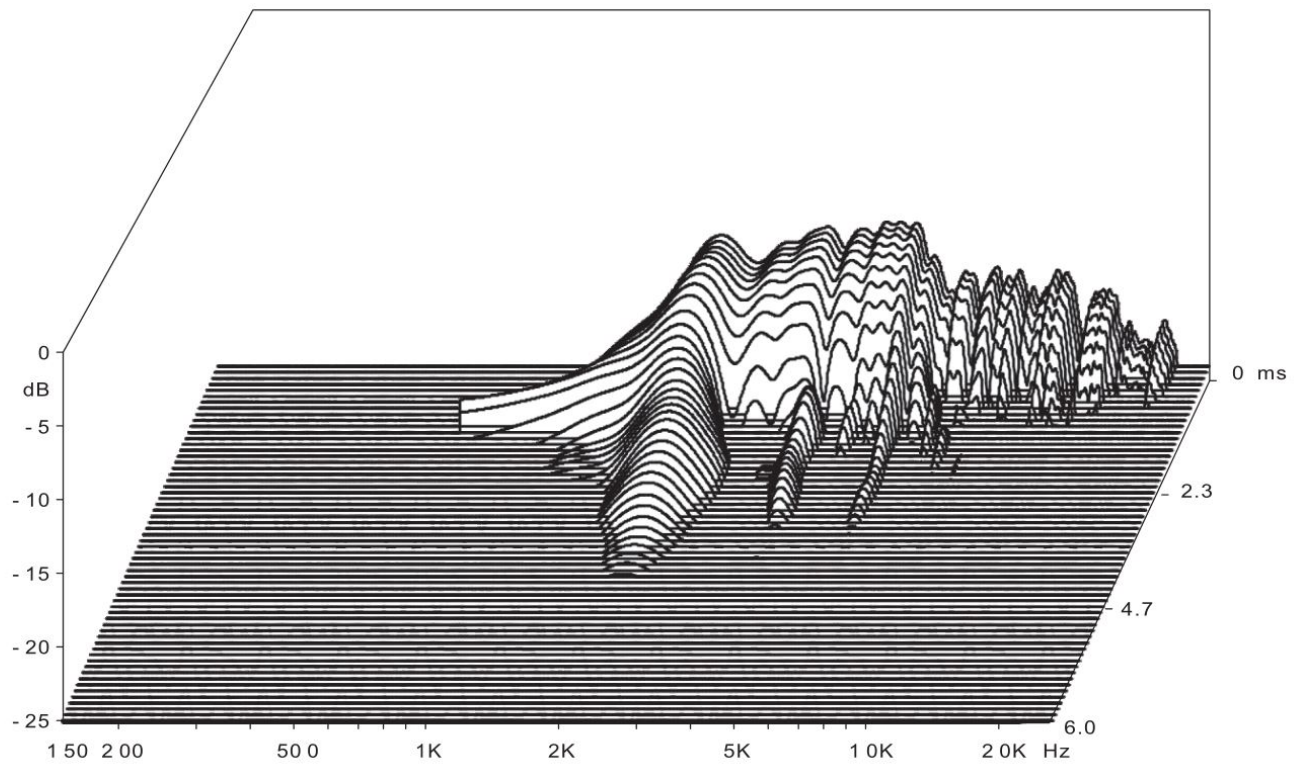
### THD-HF



### THD-LF

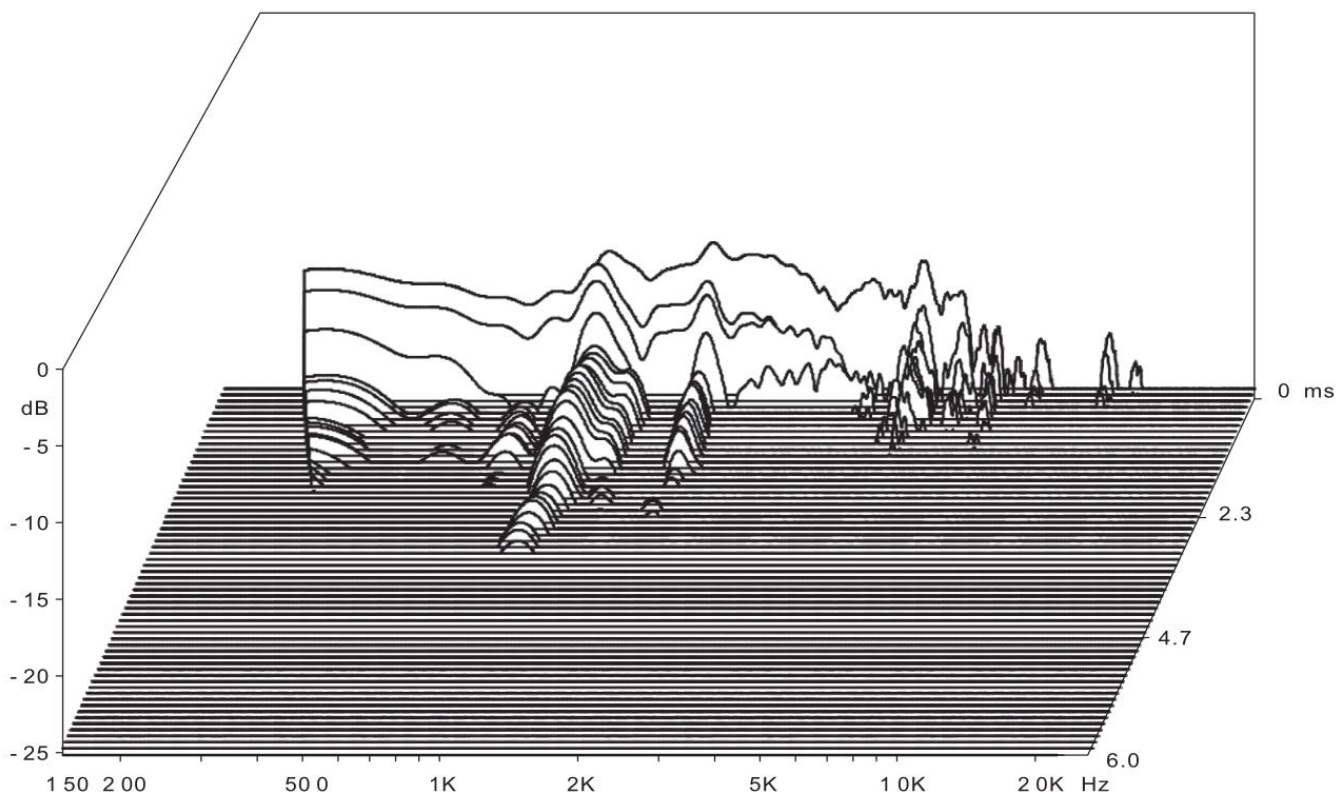


## WATERFALL-HF



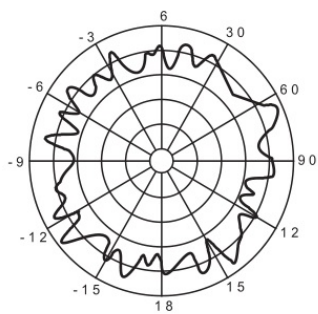
## WATERFALL-LF



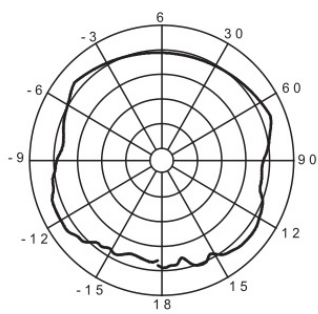


## HORIZONTAL DIRECTIVITY

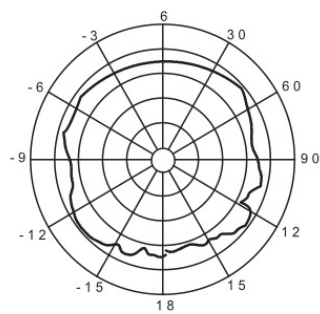
The data of TLA-101 horizontal directivity were collected by testing the speaker system in a big anechoic chamber.



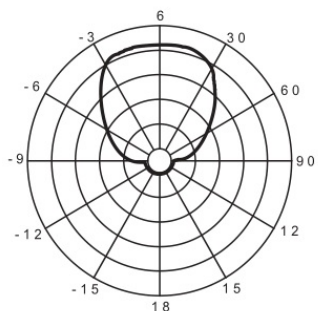
400Hz



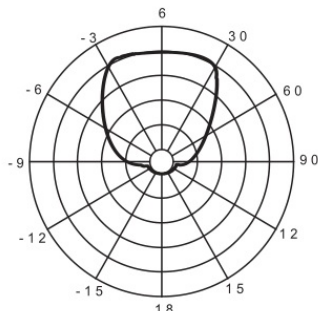
630Hz



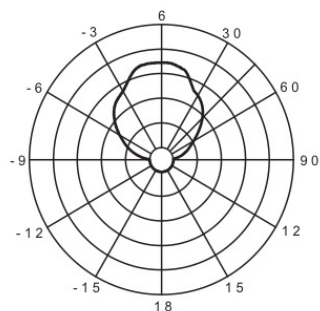
800Hz



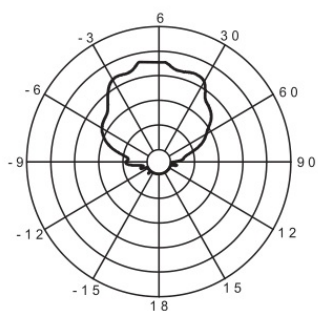
1.0kHz



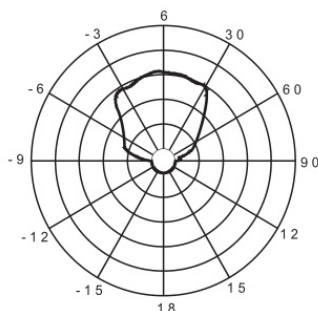
1.25kHz



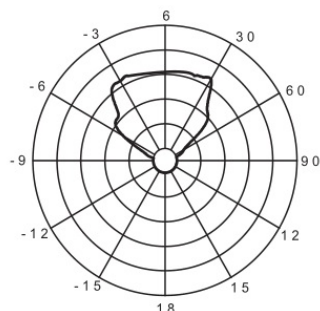
1.6kHz



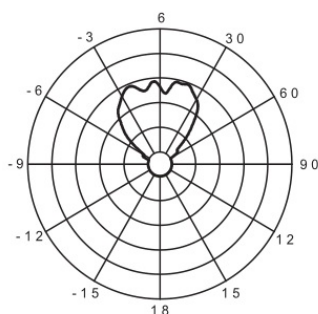
2.0kHz



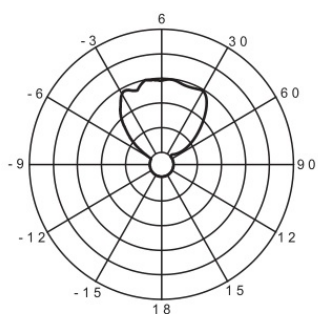
2.5kHz



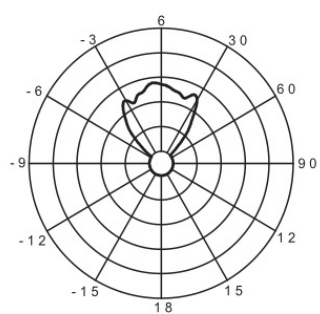
4.0kHz



6.3kHz



10kHz

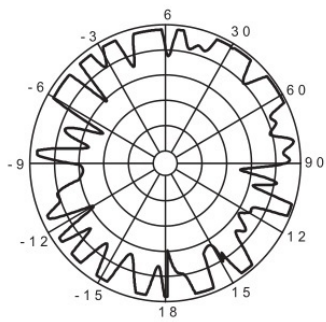


16kHz

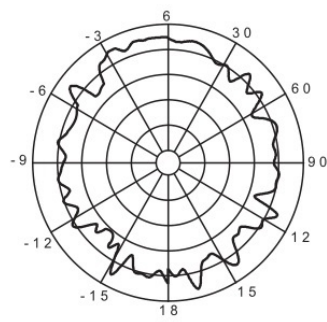
The scale is stepped by 6dB increment.

## VERTICAL DIRECTIVITY

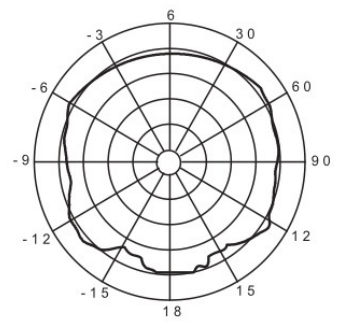
The data of TLA-101 vertical directivity were collected by testing the speaker system in a big anechoic chamber.



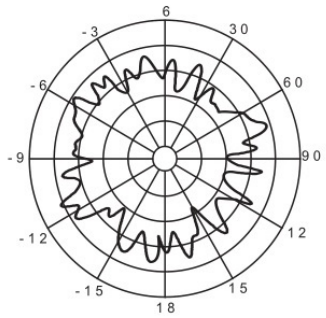
400Hz



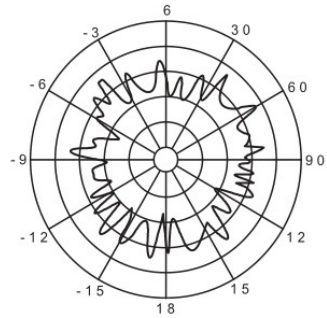
630Hz



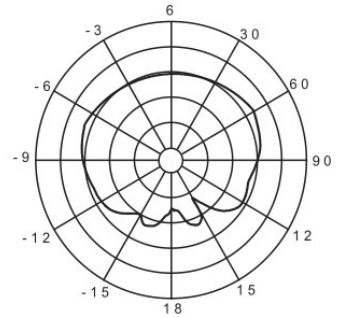
800Hz



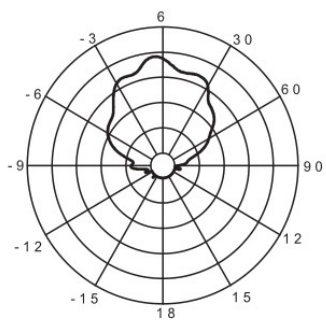
400Hz



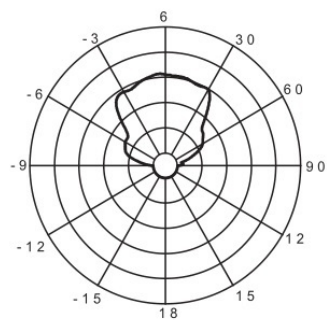
630Hz



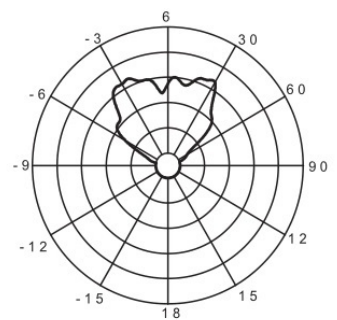
1kHz



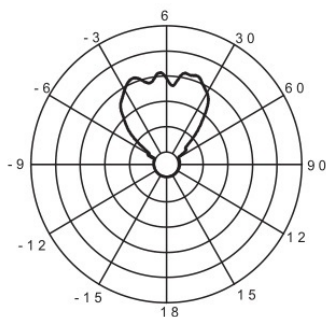
1.6kHz



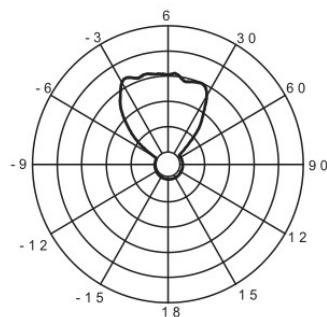
2.5kHz



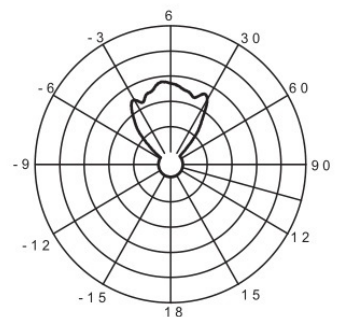
4.0kHz



6.3kHz



10kHz



16kHz

The scale is stepped by 6dB increment.

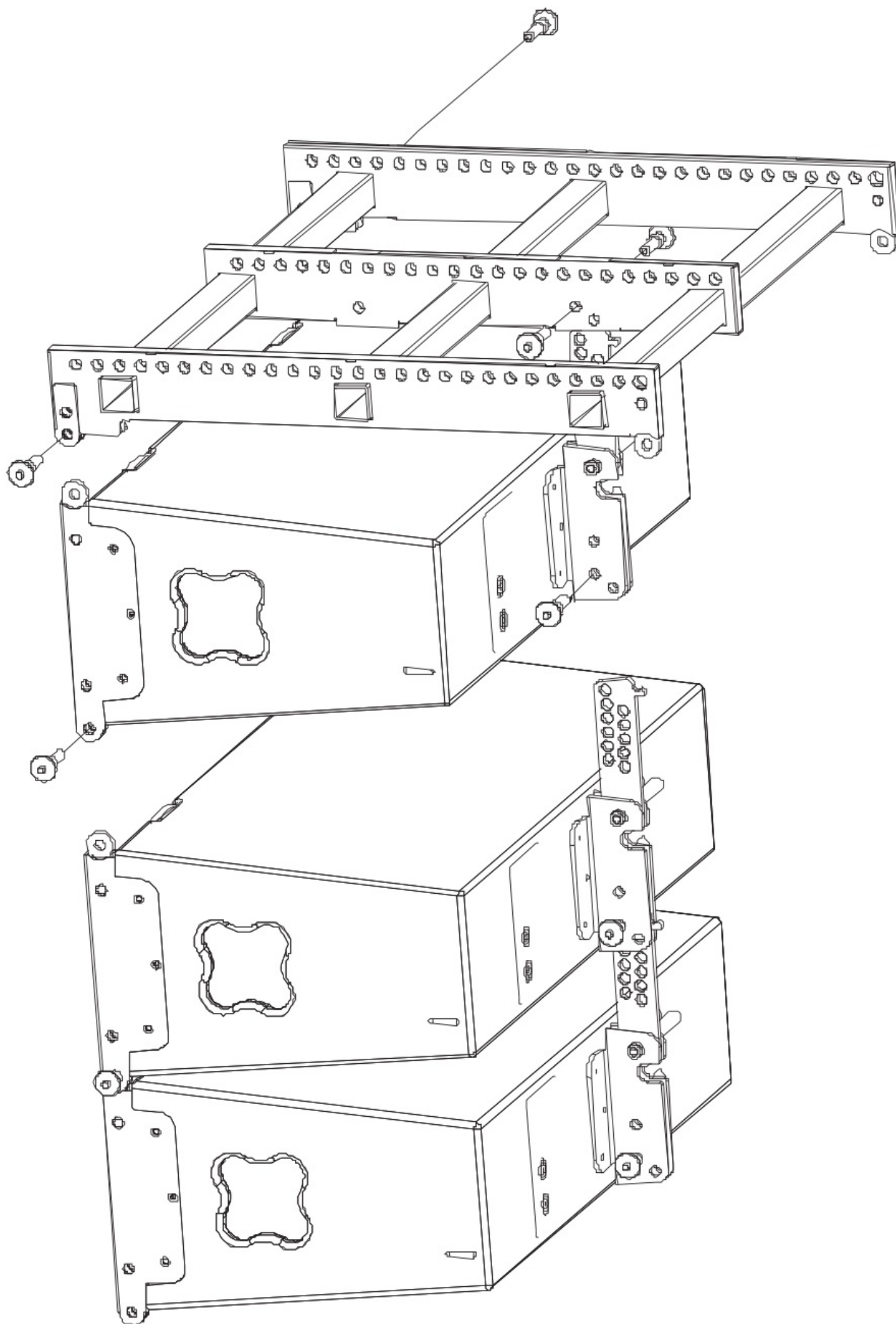
## INSTALLATION

Three points suspension system of TLA-101

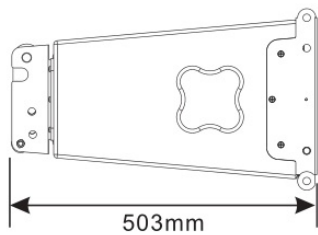
- The flying system includes TLA-101 flying metal frame, front and back rigging parts and pins.
- Rear rigging part has been assembled onto cabinet to make the vertical angle (between each unit) adjust

easier and more convenient.

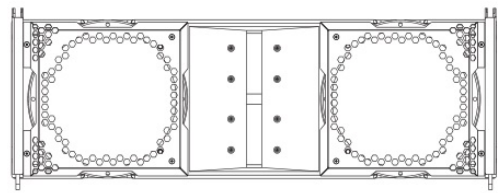
- TLA-101 flying frame is weld steel frame, we can hang up many TLA-101 speakers at the same time.



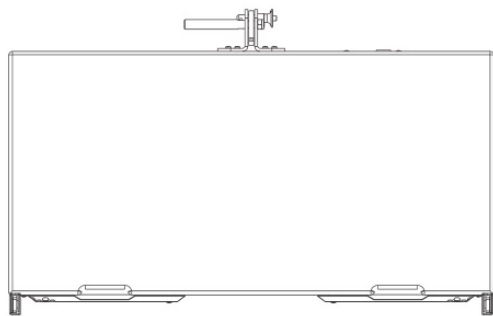
DIMENSIONS



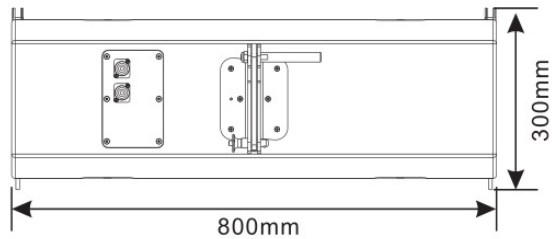
Side view



Front view



Top view



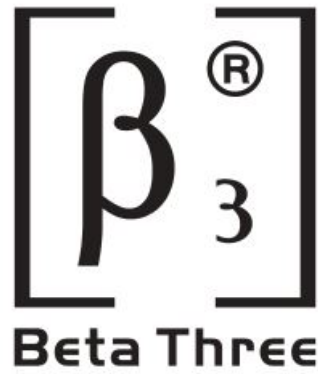
Back view

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[www.beta3pro.com](http://www.beta3pro.com)

## Documents / Resources

 <p>TLA-101</p>	<p><a href="#">Beta Three TLA-101 Line Array Loudspeaker for Medium Scale Sound Reinforcement</a> [pdf] User Manual</p> <p>TLA-101, Line Array Loudspeaker for Medium Scale Sound Reinforcement, TLA-101 Line Array Loudspeaker for Medium Scale Sound Reinforcement</p>
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## References

-  [Beta Three Professional Audio - Technology Creates Sound Enjoyment](#)