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PROFESSIONAL LOUDSPEAKERS

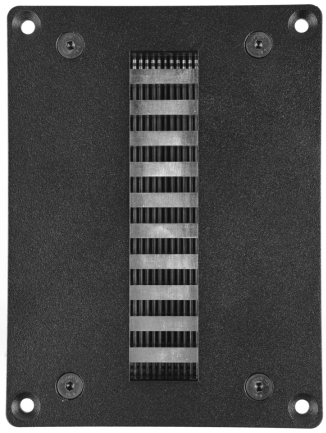
February 2008

New Release Information

TD-TPL Improving the high definition sound

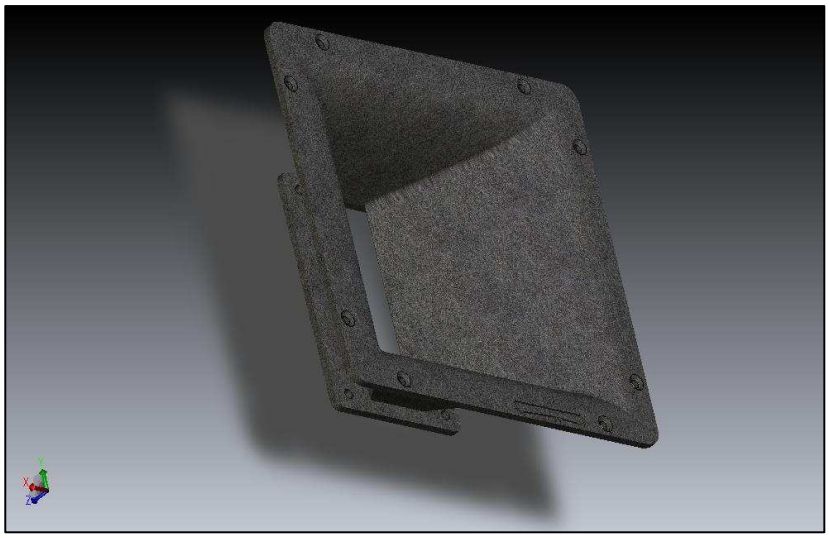
Beyma introduced last year a new type of component for the professional sound, bringing the highest sonorous quality of the most demanding audiophile to the world of live music. This type of high frequency transducer is based on the AMT technology (Air Motion Transformer). In this type of transducers, invented by the German physicist and Nobel Prize Oskar Heil, the generation of the sound takes place in a very different from the habitual one in ribbon tweeters.

The advantages of this type of tweeter can be summarized in:



- Radiation surface four times the one of a tweeter or an equivalent compression driver, thanks to its folded geometry.
- Mobility transformer of air (Air Motion Transformer) because it causes in the air a speed four times greater than the one of the folds themselves (relation 4:1).
- This confers an enormous dynamics and an incredible transient response, vastly superior to that of any conventional tweeter, including ribbon tweeters and compression drivers.

Now Beyma is introducing a horn especially designed to improve sensitivity and directivity in the mid range. The new horn will be made in cast aluminium in order to avoid undesired resonances, and will help the TPL to deliver an outstanding quality in mid/high and high frequency response for professional applications.



Acústica Beyma, S.L. - Moncada, Valencia (Spain) Tel +34 96 130 1375 Fax +34 96 130 1507 beyma@beyma.com
www.beyma.com

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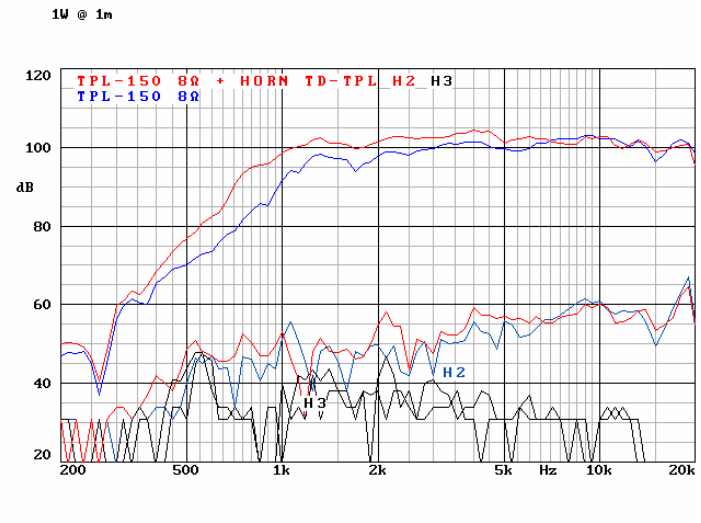
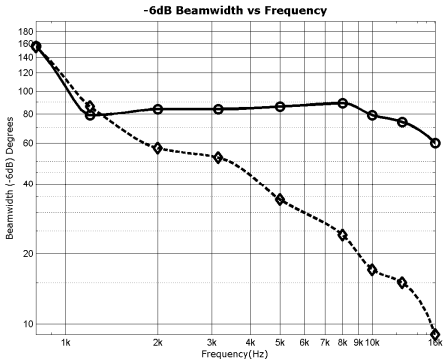
As can be seen in the frequency response curves, when coupling the horn, the frequency response of the TPL-150 is clearly improved in a wide range of frequencies. The result is a more linear response as well as an increased SPL in all its frequency range. It is also important to note the real low harmonic distortion level in the range between 1 and 5 kHz, the most sensitive region for human hearing:





There is also an important improvement in the directivity pattern; its constant directivity characteristics ensure the ability to cover 80º wide horizontally and 30º wide vertically at virtually any frequency within its operational range.

Using the complete solution (TPL-150 and TD-TPL) will be an authentic alternative to the conventional compression drivers in the PRO field when looking for superior sound quality applications. This will contribute with an enormous added value to any sound system that incorporates it. The sonic quality, timbre, definition and clarity of this product is simply amazing.

THIS IS THE KEY FOR HIGH DEFINITION SOUND

This new model will be introduced in the next PRO LIGHT & SOUND show in Frankfurt between March 12th and 15th.

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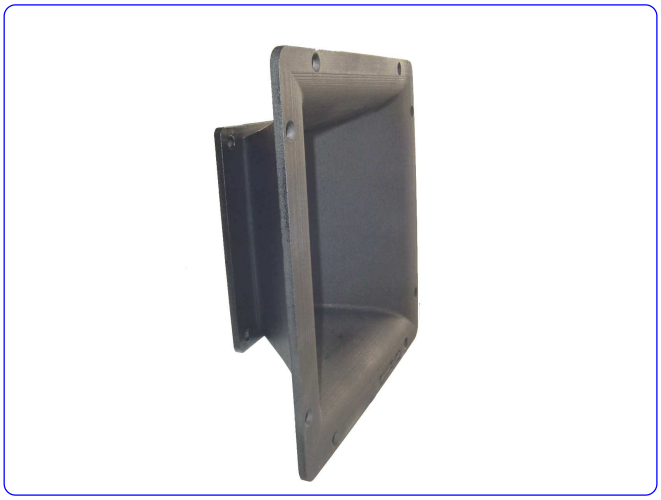
TD TPL

Constant Directivity Horn



KEY FEATURES

- Designed to be used with TPL-150 tweeter
- Coverage angles of 80º in the horizontal plane and 30º in the vertical plane
- Precise directivity control in the pass band
- Cast aluminium construction

GENERAL DESCRIPTION

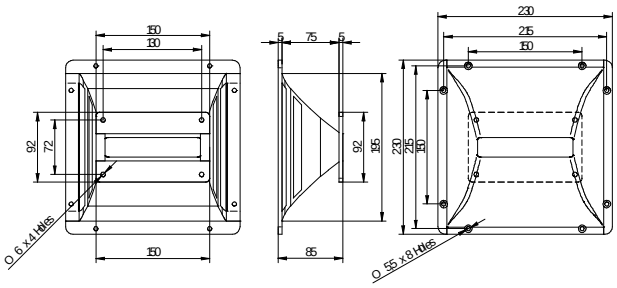
This horn has been designed to work specifically with the TPL-150 tweeter providing uniform on and off-axis response. The constant directivity characteristics of this model ensure the ability to cover 80º wide horizontally and 30º wide vertically, at virtually any frequency within its operational range. To ensure freedom of resonance, this flare is constructed of cast aluminium, with flat front finish to facilitate flush mounting.

TECHNICAL SPECIFICATIONS

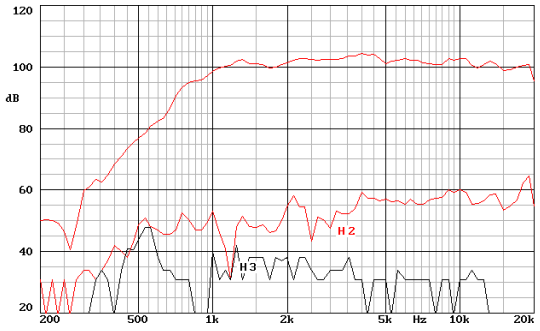
Throat dimensions (WxH)	12 x 208 mm.	0.47 x 8.19 in.
Horizontal beamwidth	80º (+9º, -20º)	
	(-6 dB, 1.2 - 16 kHz)	
Vertical beamwidth	30º (+27º , -21º)	
	(-6 dB, 2 - 16 kHz)	
Directivity factor (Q)	27 (average 1.2 - 16 kHz)	
Directivity index (DI)	13 dB (+6 dB, -4.5 dB)	
Cutoff frequency	800 Hz	
Dimensions (WxHxD)	230x230x85 mm.	9.05x9.05x3.35 in.
Cutout dimensions (WxH)	195x195 mm.	7.68x7.68 in.
Net weight	1.5 kg.	3.3 lb.
Shipping weight	1.8 kg.	3.96 lb.

Construction:
Cast aluminium.

DIMENSION DRAWINGS



FREQUENCY RESPONSE AND DISTORTION CURVES



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

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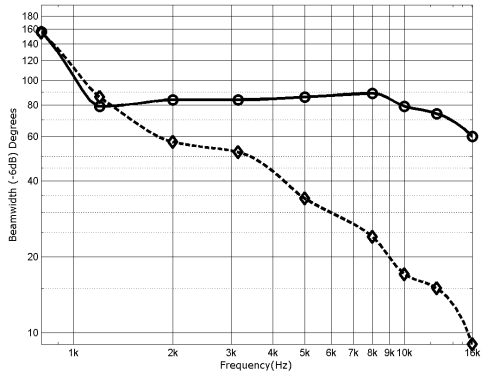
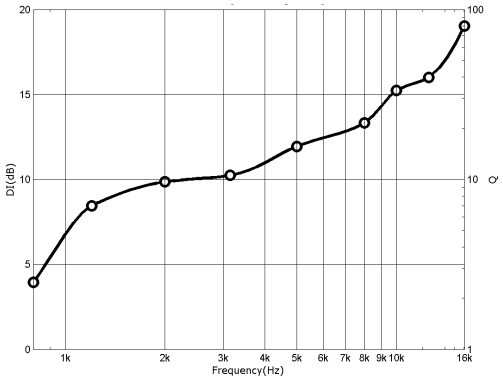
TD TPL

TPL-150 Horn

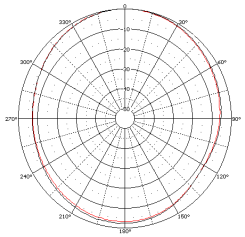
-6 dB BEAMWIDTH *



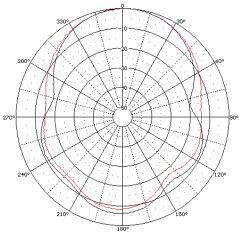
DIRECTIVITY



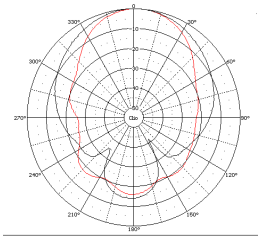
POLAR RESPONSE **



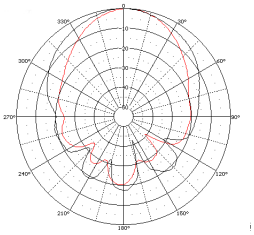
800 Hz



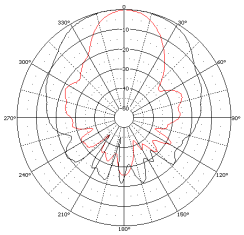
1,25 kHz



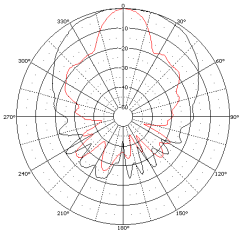
2 kHz



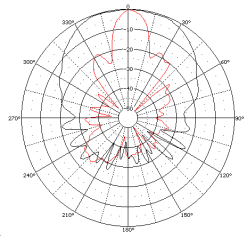
3,1 kHz



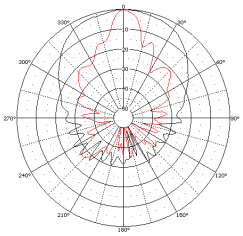
5 kHz



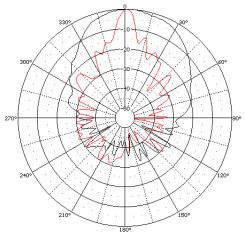
8 kHz



10 kHz



12.5 kHz



16 kHz

Notes:
*Horizontal beamwidth is represented by the heavy line.
Vertical beamwidth is represented by the discontinuous line.

** Horizontal response is represented by the black line. Vertical response is represented by the red line.
The polar plots are reproduction of measurements done with single sinusoidal signal tones, at the indicated frequencies.
The microphone was placed 2m. from the horn, and rotation was about the centre of the emitter source.

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Polígono Industrial Moncada II · C/. Pont Sec, 1c · 46113 MONCADA - Valencia (Spain)
· Tel. (34) 96 130 13 75 · Fax (34) 96 130 15 07 · http://www.beyma.com · E-mail: beyma@beyma.com ·