



OS003A Omni Sound Source

Features:

- Professional equipment for architectural acoustics testing
- Lightweight and durable design, easy to transport and handling
- 12-sides design to ensure high quality acoustic performance
- Diameter: 285 mm, weight: 6.5 kg
- Recommended accessory:
 - Power amplifier: PA300, PA700
 - Software: VA-Lab Arch



Applications:

- Building acoustics
- Reverberation time measurement
- Airborne sound insulation measurement

Introduction

OS003A is the latest development of omnidirectional sound source of BSWA. The sound source has 12 rubidium magnet loudspeakers assemble on a 280 mm diameter sphere evenly. The angle between each axes of loudspeakers exactly the same to form a regular 12-sides structure. Each loudspeaker was selected via a careful process. The special electrical connection ensures the phase synchronization of each unit and guarantees the impedance match the power amplifier. Such design and implementation lead to a stable spherical radiation sound source.

OS003A comply with ISO 10140-5, ISO 3382, GB/T 19889.3 and GB/T 19889.4 standard. Sound source can reach 120 dB re 1 pW (Pink) sound power level with suitable power amplifier. PA300, PA700 and YAMAHA P2500S power amplifier are provided to drive sound source.

OS003A can be place on flat surface by five rubber foot, hang in a test chamber by rings or mounted on a special tripod (option) by a supplied POM base socket. The stainless steel lifting handle makes it easy to transport and handling.

Compare to previous generation product, the new omnidirectional sound source is smaller size, lighter weight, more compact and wider scope of application. Easy to carry out reverberation time, airborne sound insulation and other building acoustics testing.

Specifications

Standards	ISO 10140-5, ISO 3382, GB/T 19889.3, GB/T 19889.4
Impedance	6 Ω
Rated Power	250 W (Continuous)
Peak Power	500 W (Short Duration: duty cycle 1/5, on time 10 s)
Frequency Range	100 Hz ~ 12.5 kHz
Sound power level	120 dB re 1 pW (Pink) Min. 100 dB re 1 pW in each 1/3 octave band of 125 Hz ~ 2.5 kHz
Audio Connector	speakON socket
Loudspeaker Units	Rubidium magnet loudspeaker (4-inches, 8 Ω , 30 W)
Diameter	285 mm (include loudspeaker), 280 mm (only sphere body)
Weight	6.5 kg
Shipping case Dimension (mm)	W555 x H425 x D345



Performance Chart

Fig.1 Frequency response for 1/3 octave sound power level using power amplifier YAMAHA P2500S with pink noise

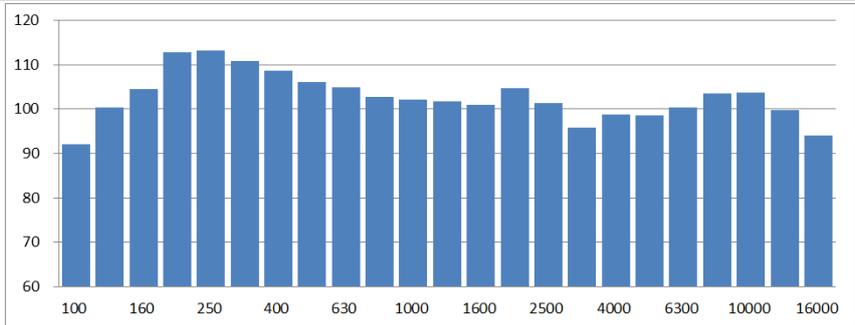


Fig.2 Frequency response for 1/1 octave sound power level using power amplifier YAMAHA P2500S with pink noise

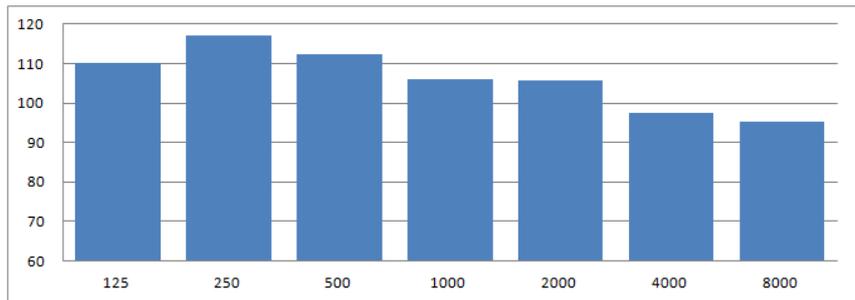


Fig.3 Directivity according to ISO 140: maximum deviation from mean for 'gliding' 30°arc. Upper and lower curves are the ISO 140 tolerances

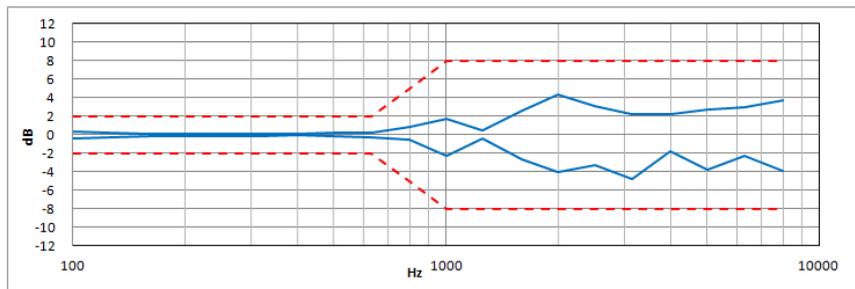


Fig.4 Directivity according to ISO 3382: maximum deviation from mean for 'gliding' 30°arc. Upper and lower curves are the ISO 3382 tolerances

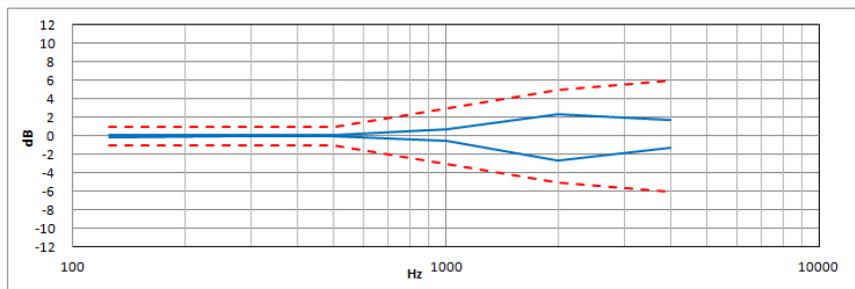
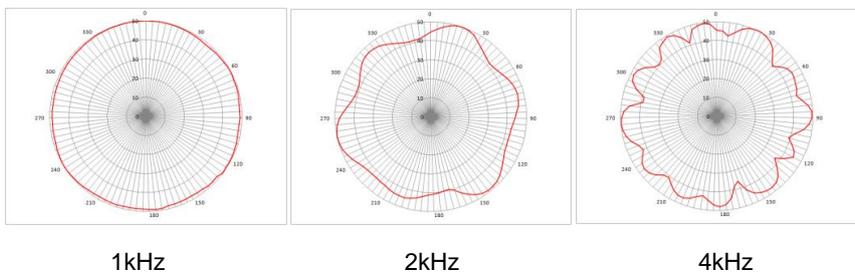


Fig.5 Directional response for the horizontal plane. Below 1 kHz there is no significant deviation from omnidirectional





Hardware

