



Pendant Speakers

Models:

OPS1W (Off-white)
& OPS1B (Dark Gray)



OPS1W
(Off-white)



OPS1B
(Dark Gray)

Description

The Bogen Orbit Pendant Speaker (OPS1) is the ideal choice for high ceiling and open space environments.

The OPS1 features MLS and MDT technologies (see below), which improve sound quality and increase operating reliability.

The low-distortion speaker design, featuring a spiderless driver and one-piece metal-alloy cone structure, delivers superb articulation and the highest intelligibility for both music and speech.

MDT (Metal Diaphragm Technology):

- Solid, one-piece cone structure eliminates the traditional dust cap
- Extremely stable cone structure over extended periods
- Fast transmission of sound through the diaphragm means low energy storage
- Special hard anodizing process creates a ceramic surface for increased stiffness
- Super-efficient thermal path for cooling the voice coil (not paper or plastic)
- High rigidity and low mass versus typical paper or plastic cones

MLS (Magnetic Liquid Suspension):

- Magnetic liquid (Ferrofluid) injected into magnet gap
- Constant lubrication of the gap prevents oxidation from occurring
- Voice coil is most efficiently cooled by fluid path rather than air
- Lower distortion via stronger centering forces on voice coil
- Increased reliability, particularly in high power daily use systems

Features

- Wide dispersion coaxial driver for broad, even 140° coverage
- Stable, high definition metal-alloy cone
- MDT cone design delivers detailed sound
- MLS eliminates conventional centering “spider” for more accurate voice coil centering
- High-efficiency drivers deliver superior performance
- Extremely good off-axis response
- Computer-matched venting system for full bass output
- High power handling capability for foreground sound
- Selectable power taps via front-mounted control
- 16-ohm input for non-transformer multi-speaker systems
- Easy wiring with snap-on connector
- Connector provides loop-through to next speaker
- Easy to use cable suspension system that includes three suspension cables with attached forged eyebolts
- Threaded brass insert point for optional safety cable eye bolt
- Low-resonance cabinet structure
- Off-white or dark gray textured finish; easily painted to match theme decors
- Attractive, contemporary, sturdy steel grille assembly with fine perforations
- Listed to UL Standard 60065 for US and Canada
- Accessory 10-foot long cable kit for use as main drop cable or safety cable (Model CK10 sold separately)

Technical Specifications

SPECIFICATIONS	OPS1
Frequency Response (-10 dB) *	45 Hz to 19 kHz
LF Driver	6-1/2" MDT Metal-Alloy Cone (MLS Voice Coil Centering System)
HF Driver	20mm (3/4") Polycarbonate Dome
Sensitivity (1W/1 m)	89.5 dBspl (Average 100 Hz - 10 kHz)
Dispersion	140 degrees
Impedance Ratings	Low (16 ohms) / High (70V/100V)
Power Input (Max.)	100W @ 16 ohms; 32W @ 70V/100V
Power Settings (in watts)†	70V: 32, 16, 8, 4, 2, 1 100V: 32, 16, 8, 4, 2
Enclosure Material	Fire-rated (94VO) ABS
Grille Material	Powder-Coated Perforated Metal
Terminations	4 Terminal Snap-Lock Input Connector
Product Weight	10 lb.
Speaker Dimensions	15" dia. x 9-1/4" D
Included Accessories	(3) Suspension Cables; (3) Forged Eye Bolts; (3) Nuts; (1) Quick-Snap Clip; (1) Snap-Lock Input Connector
Optional Accessories	Cable Kit (CK10)
Enclosure Finish & Color	Textured Off-white or Dark Gray

* Free-Space Response, 16-ohm input

† Front panel switch selected (under grille)

Architect & Engineer Specifications

The loudspeakers shall be ORBIT Model OPS1W (Off-white), and OPS1B (Dark Gray) or approved equivalent, consisting of one 6-1/2" (nominal) low frequency transducer, and one 20mm (3/4") (nominal) high frequency transducer with a filter network for dividing frequencies between the transducers.

An injection-molded, ABS material containing fire inhibitors with a 94VO rating, shall house all components.

The enclosure shall be supplied in either off-white or dark gray in color with a mild texture finish to promote paint adhesion if desired. A perforated speaker grille shall be made from heavy-gauge steel, color-matched to the enclosure.

The low-frequency driver shall utilize a metal-alloy cone with hard-anodized surface treatment for rigidity and corrosion resistance. The cone shall provide a heat transfer element for the voice coil under high-power input. A compounded rubber cone surround shall be formulated to withstand environmental conditions with high or low heat, high or low humidity, and ultra-violet light. The voice coil shall be protected via a high gauss low viscosity magnetic liquid (ferrofluid), to prevent corrosion from occurring in the magnet gap. The fluid will also serve as a thermal path to further reduce heat build-up in the voice coil. The driver will utilize the ferrofluid to provide a centering force for the voice coil in the magnet gap.

The high-frequency driver shall utilize a diaphragm consisting of black polycarbonate. Ferrofluid shall dampen the voice coil and facilitate the transfer of heat from the coil to the magnet structure.

The hanging cables shall be designed with forged eye bolts captured on one end to attach directly to the enclosure. The other end of the cables shall have a secured loop that will attach to a quick connect clip. An integral safety cable attachment point shall be included in the enclosure. An optional 10-foot cable kit (CK10) shall be available to serve as a back-up safety cable or main suspension drop cable. An internal safety strap ensures that the drivers are secured to the upper suspension.

The input connector shall be a 4-screw snap-lock removable connector, providing "loop-through" for additional speakers.

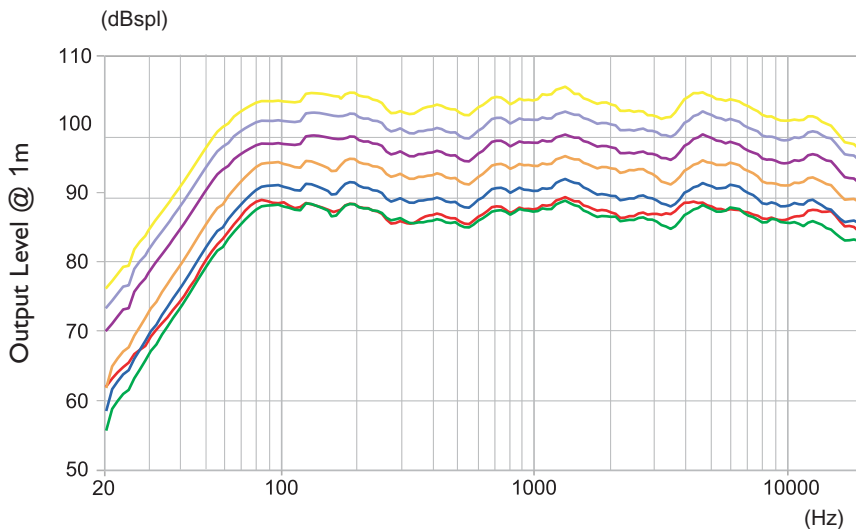
Power input selection shall be via a front-mounted rotary switch, located under the removable grille. 70V (high-impedance) tap selections shall be 1, 2, 4, 8, 16, and 32 watts; 100V (high-impedance) tap selections shall be 2, 4, 8, 16, and 32 watts. A low-impedance 16-ohm selection shall also be provided. Dispersion area shall be 140°.

Dimensions of the speaker shall not exceed 15" diameter x 9-1/4" high. Product weight shall not exceed 10 lb.

Frequency Response

Open space @ 1m

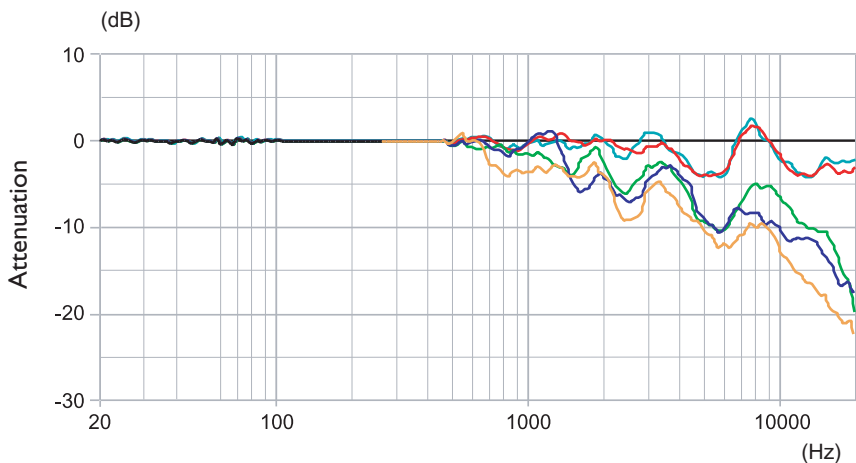
- 32W —
- 16W —
- 8W —
- 4W —
- 2W —
- 1W —
- 16 ohms (@ 1W) —



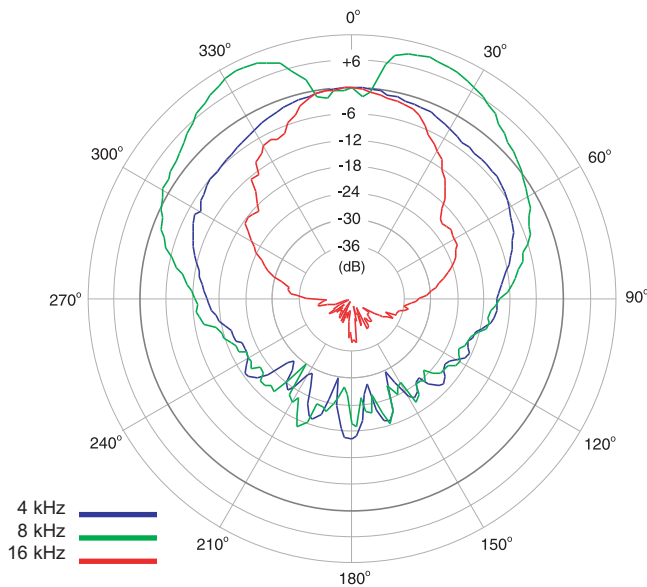
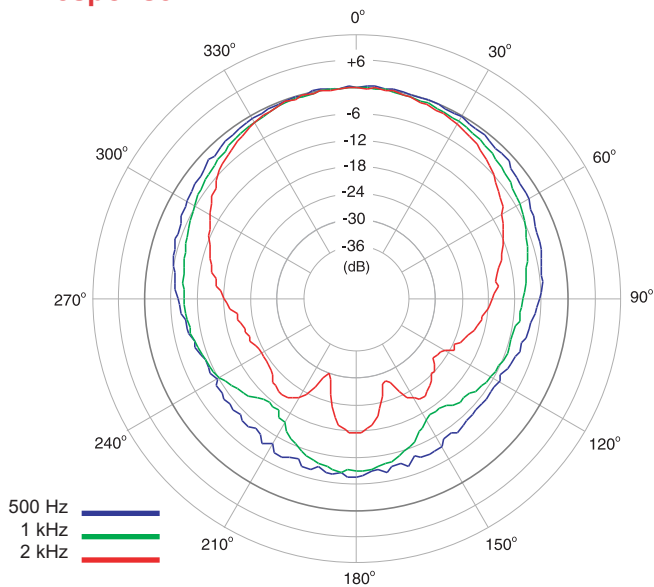
Off-Axis Response

Graph shows modification to an on-axis response.

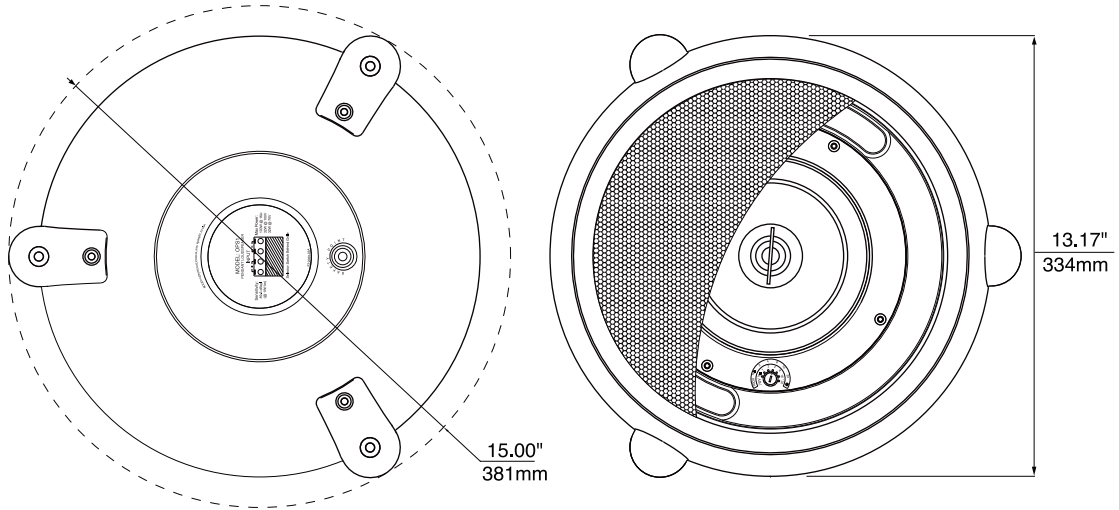
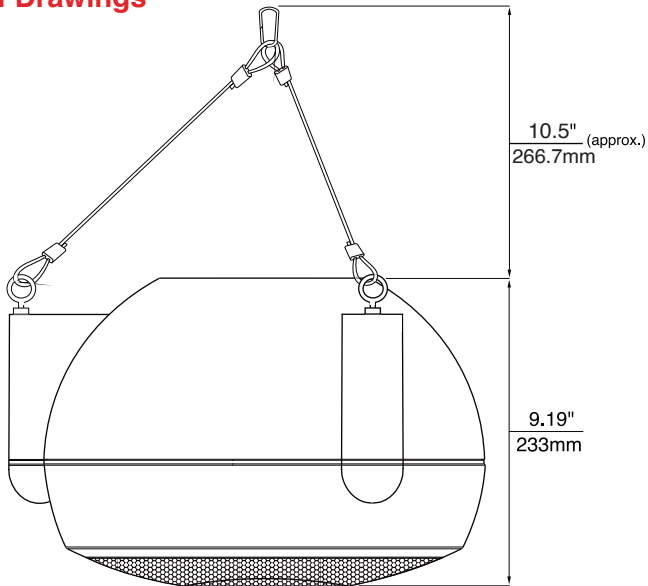
- 90 deg —
- 60 deg —
- 45 deg —
- 30 deg —
- 15 deg —
- 0 deg —



Polar Response



Mechanical Drawings



(Grille shown partially removed)