



# Bogen OPS1 Orbit Pendant Speaker User Manual

[Home](#) » [Support](#) » Bogen OPS1 Orbit Pendant Speaker User Manual 

## Contents

- [1 Bogen OPS1 Orbit Pendant Speaker](#)
- [2 Product Description](#)
- [3 IMPORTANT SAFETY INSTRUCTIONS](#)
- [4 Product Diagrams](#)
- [5 Package Contents](#)
- [6 SelectingPowerLevel](#)
- [7 Speaker Grill Installation & Removal](#)
- [8 Speaker Wiring](#)
- [9 Speaker Installation](#)
- [10 Accessory](#)
- [11 Specifications](#)
- [12 Warranty](#)
- [13 FAQs](#)
- [14 Related Posts](#)

**BOGEN®**

**Bogen OPS1 Orbit Pendant Speaker**



## Product Description

- The Bogen OPS1 Pendant Loudspeaker is a full-range, wide dispersion system providing overhead sound coverage where ceiling structures are high but the sound needs to be closer to the audience/listener. An optional cable kit (CK 10), suitable for safety or main drop cable, is available.
- Settings for both 70V and 1 00V high-impedance systems, as well as a low-impedance (16-ohm) position, are provided.
- The OPS1 features a removable snap-lock input connector, providing easy wire connection for input as well as loop-through to the next speaker.

Always follow these basic safety precautions when installing and using the unit:

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the unit with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or the third prong, are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer. An operation manual is provided with the product.
12. Unplug this apparatus during lightning storms or when not used for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**IMPORTANT** The OPS1 is not an outdoor speaker. Do not expose the speaker to rain or moisture. The OPS1 should be installed by qualified personnel.

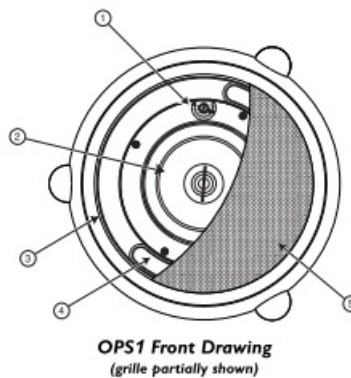
### **WARNING!**

YOU MUST USE A SAFETY CABLE AND SECURELY TIGHTEN ALL HARDWARE, CABLE CLAMPS, AND INSTALL EYEBOLTS AS DIRECTED IN THESE INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN PROPERTY DAMAGE, INJURY OR DEATH, AND LEGAL LIABILITY TO YOU AND YOUR COMPANY.

## **Product Diagrams**

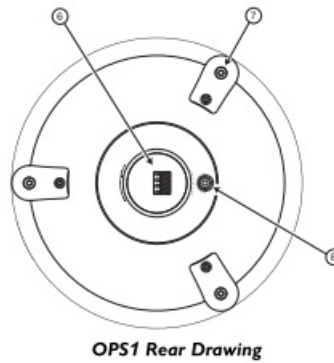
### **OPS1 Front Drawing**

- 1. Tap Selection Switch
- 2. Coaxial Driver Assembly
- 3. Grille Retention Slot
- 4. BassTuningVent (x2)
- 5. Perforated Steel Grille



### **OPS1 Rear Drawing**

- 6. Snap-Lock Input Connector
- 7. Suspension Points (x1)
- 8. Safety Cable Attachment Point



## Package Contents

- Orbit Pendant Speaker
- Snap-Lock Input Connector
- Quick-Snap Clip
- Suspension Cables with Forged Eyebolts (1) Separate Eyebolt
- Nuts (may be installed onto eyebolts)

## Selecting Power Level

Select the power level using the front-mounted selector switch. The speaker grille must be removed prior to selecting the power level. See the Speaker Grille Installation & Removal section for proper grille removal procedures.

### Selecting Power Level

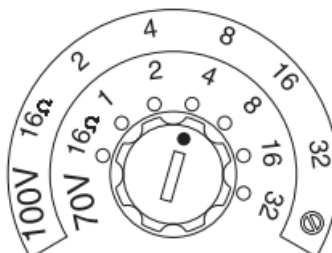
The front-mounted selector switch (under the grille) is used to set the appropriate power level or impedance for your system. Using a small flat-blade screwdriver, turn the knob until the slot points to the power level you require.

### 70V/100V Systems

Both power setting scales for 70V and 1 OOV systems are labeled on the speakers. On the 1 OOV scale, the last position clockwise is marked with a ® (not available) symbol. Do not use this position in 1 OOV system.

### 16Q Systems

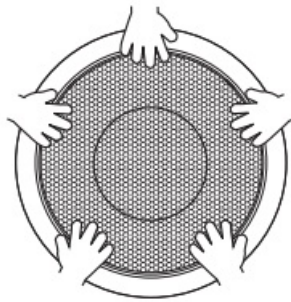
The fully counterclockwise position of the setting switch is the 16-ohm position. This setting is suitable for use with low-impedance amplifiers that typically support 4- or 8-ohm speakers. The speaker's higher, 16-ohm impedance makes it easier to combine multiple speakers into series-parallel networks while keeping the total system impedance at a level suitable for low-impedance amplifiers.



## Speaker Grill Installation & Removal

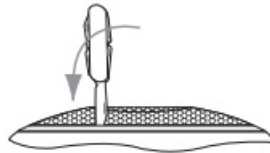
## Installation

The speaker grille fits tightly! Make sure the tap settings are correct prior to re-installing the grille. Push the speaker grille in until it can go no further. Then, slap around the edge of the grille to seat the grille. The grille is properly seated when it is flush with the edge of the bezel.



## Removal

Insert a pocketknife blade between the grille and the bezel about 1/4" deep and then gently pry the grille upwards. Do this in multiple places around the circumference of the grille to free the grille.

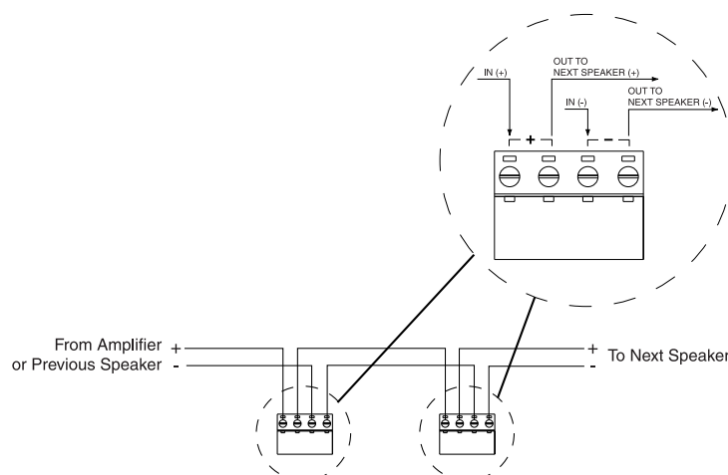


## Speaker Wiring

Wiring is terminated at a snap-lock input connector. There are two positive and two negative terminals to accommodate daisy-chaining of speakers in a system. All wiring should be done prior to installation and then plugged into the rear of the OPS1.

### Daisy-Chaining

The OPS 1's snap-lock input connector allows \ for easy daisy-chaining of speakers by providing a second terminal for each polarity. Refer to the \ figures for proper wiring for daisy-chaining of terminals.



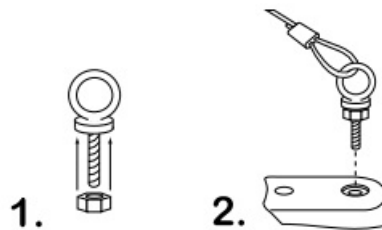
## Speaker Phasing

- Keep the same polarity terminals wired together to ensure correct phasing. In order to provide the best possible sound, all of the speakers in a system need to be pushing out and pulling in at the same time.
- If the connections to one speaker in a system are reversed from the others, that speaker's movement will be out of sync with the other speakers. This will result in a loss of low-frequency response and will effect the overall performance of the system.

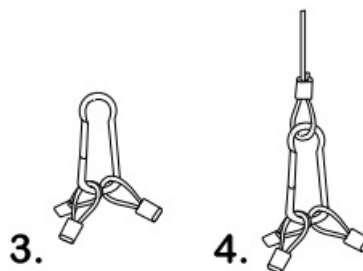
## Speaker Installation

### Speaker Assembly

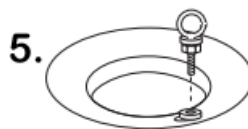
1. Screw one nut onto each of the three (3) eyebolts. These nuts are used as spacers and should be threaded on as far as they can go.
2. Screw in eyebolts with captured cable sections into the three (3) threaded anchor points. Make these connections secure but do not over-tighten.



3. Snap the loops of the three (3) free ends of the cable sections into the quick-snap clip.
4. Connect the quick-snap clip to the drop cable loop (not included).



5. A separate eyebolt and nut are provided for installing the safety cable attachment point. Thread the nut onto the eyebolt as far as it will go and thread this assembly into the safety point on the top of the speaker. Make this connection secure but do not over-tighten.

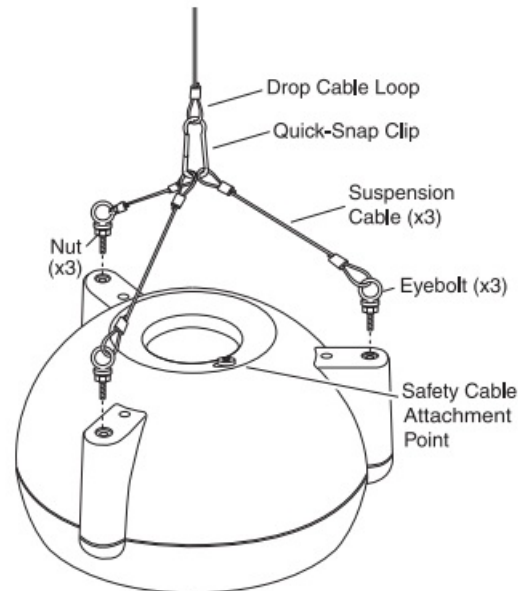


### Cables

- A BACKUP SAFETY CABLE FOR THE PRIMARY DROP CABLE IS REQUIRED FOR THE PROPER INSTALLATION OF THIS SPEAKER.
- SEE THE INSIDE FRONT COVER FOR IMPORTANT WARNING INFORMATION.

Use wire rope or other drop line rated for at least 100 lbs. to ensure a safety margin. If using wire rope with a coating, it is important that the coating be stripped away where any clamping device is being used so that the bare wire cores of the cable are being clamped. The anchor point of the building structure must be able to handle 100 lbs. and all clamping hardware must be very securely tightened unless otherwise instructed. Use only one OPS1

on a set of safety & suspension rigging.



## Accessory

### CK10 (Cable Kit, 10')

The CK10 is a 10-foot cable with one looped end, a forged eyebolt (with 1/4-20" x 1/2" thread), and an adjustable cable clamp. It is suitable for use as a drop cable or safety cable. The CK 10 is available in black, white, or silver.

## Specifications

- **Frequency Response (-10 dB):** 45 Hz to 19 kHz
- **LF Driver:** 6-1/2" MDT Metal-Alloy Cone (MLSVoice Coil Centering System)
- **HF Driver:** 20 mm (3/4") Polycarbonate Dome
- **Sensitivity (1W/1 m):** 89.5 dB SPL
- **Dispersion:** 140°
- **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, 1W
  - 100V: 32, 16, 8, 4, 2W
- **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:**
  - (1) Quick-Snap Clip
  - (1) Snap-Lock Input Connector
  - (3) Suspension Cables w/Forged Eyebolts
  - (4) Nuts
  - (1) Separate Eyebolt

- **Optional Accessories:** Cable Kit (CK10)
- **Enclosure Finish & Color:** Textured Off-white or Dark Gray
- **Listings:** Listed to UL Standard 60065 for US & Canada

Free Space Response, 16-ohm input

Front panel, switch-selected.

## Warranty

### Limited Warranty; Exclusion of Certain Damages

The Bogen ORBIT Pendant Speaker, Model OPS1, is warranted to be free from defects in material or workmanship for five (5) years from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective, will be repaired or replaced by Bogen, at our option, provided the product is shipped insured and prepaid to: Bogen Factory Service Department, 4570 Shelby Air Drive, Suite 11, Memphis, TN 38118 USA. The product will be returned to you freight prepaid. This warranty does not extend to any of our products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation, or have been modified repaired, or altered in any manner whatsoever, or where the serial number or date code has been removed or defaced.

THE FOREGOING LIMITED WARRANTY IS BOGEN'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. BOGEN MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW. Bogen's liability arising out of the manufacture, sale, or supplying of products or their use or disposition, whether based upon warranty, contract, tort, or otherwise, shall be limited to the price of the product. IN NO EVENT SHALL BOGEN BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF DATA OR LOSS OF USE DAMAGES) ARISING OUT OF THE MANUFACTURE, SALE, OR SUPPLYING OF PRODUCTS, EVEN IF BOGEN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Products that are out of warranty will also be repaired by the Bogen Factory Service Department — same address as above or call 201-934-8500. The parts and labor involved in these repairs are warranted for 90 days when repaired by the Bogen Factory Service Department. All shipping charges in addition to parts and labor charges will be at the owner's expense. All returns require a Return Authorization number. For the most efficient warranty or repair service, please include a description of the failure.

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- Website: [www.bogen.com](http://www.bogen.com)

## FAQs

What is the Bogen OPS1 Orbit Pendant Speaker used for?



The Bogen OPS1 Orbit Pendant Speaker is designed to provide overhead sound coverage in spaces with high ceilings while bringing the sound closer to the audience or listener. It is suitable for various audio systems, including both high-impedance and low-impedance systems.

What are the power options for the OPS1 speaker?

The OPS1 speaker supports both 70V and 100V high-impedance systems, as well as a low-impedance (16-ohm) setting. You can select the appropriate power level using the front-mounted selector switch.

How do I install and remove the speaker grille?

To install the speaker grille, ensure that the tap settings are correct, then push the grille in until it is flush with the bezel. To remove the grille, gently pry it upwards using a pocketknife blade in multiple places around the circumference.

Can I daisy-chain multiple OPS1 speakers together?

Yes, you can daisy-chain multiple OPS1 speakers together using the snap-lock input connector, which provides terminals for daisy-chaining. Make sure to follow the provided wiring instructions for proper daisy-chaining.

What safety precautions should I follow during installation?

Always follow safety precautions, including reading and keeping the instructions, ensuring proper ventilation, protecting the power cord, and unplugging the speaker during lightning storms or extended periods of non-use. Additionally, use a safety cable and securely tighten all hardware, cable clamps, and install eyebolts as directed to prevent property damage, injury, or death.

How long is the warranty for the OPS1 speaker?

The Bogen OPS1 Orbit Pendant Speaker comes with a limited warranty of five (5) years from the date of sale to the original purchaser.

Where can I get repairs for the OPS1 speaker if it's out of warranty?

If your OPS1 speaker is out of warranty and requires repairs, you can contact the Bogen Factory Service Department. They can provide repair services with parts and labor warranted for 90 days. For inquiries and returns, refer to the provided contact details.

Can the OPS1 speaker be used outdoors?

No, the OPS1 speaker is not suitable for outdoor use. It should not be exposed to rain or moisture and should be installed indoors by qualified personnel.

What is the purpose of the CK10 (Cable Kit, 10') accessory?

The CK10 is a 10-foot cable kit with various components, including a looped end, a forged eyebolt, and an adjustable cable clamp. It is suitable for use as a drop cable or safety cable, providing flexibility in installation and safety measures.

How do I select the appropriate power level for the OPS1 speaker?

To select the power level for the OPS1 speaker, use the front-mounted selector switch. Ensure that the speaker grille is removed before making your selection. The switch allows you to choose between different power levels and impedance settings based on your system requirements.

Can I use the OPS1 speaker with both high-impedance and low-impedance amplifiers?

Yes, the OPS1 speaker is versatile and compatible with both high-impedance (70V and 100V) systems and low-impedance (16-ohm) amplifiers. This flexibility makes it suitable for a wide range of audio setups.

What is the dispersion pattern of the OPS1 speaker?

The OPS1 speaker features a wide dispersion pattern with a 140° coverage angle. This dispersion pattern ensures even sound coverage throughout the intended area.

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