



# Orbit Pendant Speaker OPS1

Installation and Use Manual

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# Product Description

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Thank you for choosing NEAR® Orbit Pendant Loudspeakers. You have purchased one of the finest pendant loudspeakers available today, the NEAR Model OPS1. Please familiarize yourself with this product by reading and reviewing the following descriptions and diagrams.

All NEAR products include similar technical and design aspects that are unique to the market. NEAR invented and patented the "spiderless" woofer (MLS™), which features a high-gauss ferrofluid to guide the voice coil through the magnetic field. The benefits over conventional woofers with cloth spiders are several, including the ability to constantly adjust voice coil alignment, extend linear excursion, and the most efficient path for cooling the voice coil.

In addition, the use of metal-alloy cone structures provides several benefits over the usual paper or plastic cone, such as elimination of cone flex or "break-up" in the operating ranges, additional thermal path for the voice coil to stay cool, and an extremely stable cone structure unaffected by the environment.

The NEAR 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 (CK10) suitable for safety or main drop cable is available.

Settings for both 70V and 100V high-impedance systems, as well as a low-impedance (16-ohm) position, are provided. Also, a conversion chart for speaker use in 25V systems is provided in this manual.

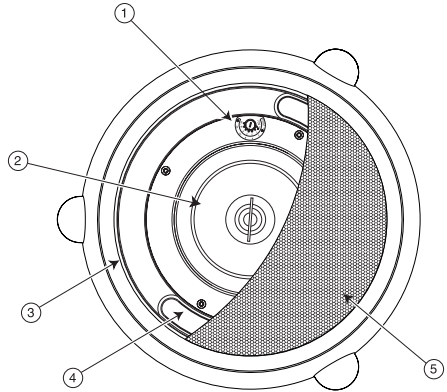
All ORBIT models feature a removable snap-lock input connector, providing easy wire connection for input as well as loop-through to the next speaker.

# Product Diagrams

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## OPS1 Front Drawing

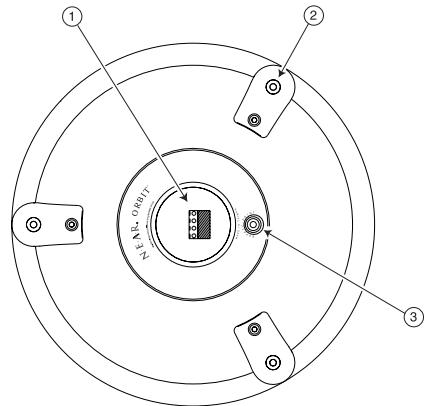
1. Tap Selection Switch
2. Coaxial Driver Assembly
3. Grille Retention Slot
4. Bass Tuning Vent (x2)
5. Perforated Steel Grille



OPS1 Front Drawing

## OPS1 Rear Drawing

1. Snap-Lock Input Connector
2. Suspension Points (x3)
3. Safety Cable Suspension Point



OPS1 Rear Drawing

## Package Contents

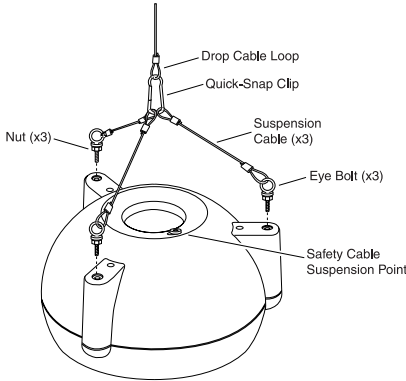
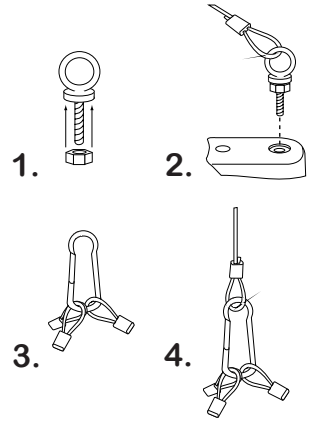
- (1) Orbit Pendant Speaker
- (1) Manual
- (1) Quick-Snap Clip
- (1) Snap-Lock Input Connector
- (3) Forged Eye Bolts
- (3) Nuts
- (3) Suspension Cables

# Installation

If the power level is known, then select it using the front-mounted selector switch prior to installing the OPS1. See section *Selecting Power Levels*.

## SUSPENSION CABLE ASSEMBLY

1. Screw nuts onto the eye bolts all the way to the flange.
2. Screw in eye bolts with captured cable sections in to the three suspension points. Do not overtighten.
3. Snap loops of free end of cable sections into quick-snap clip.
4. Connect quick-snap clip to anchor point or drop cable. Bogen's CK10 cable kit is suitable for use as the drop cable.



## SAFETY CABLE

The OPS1 includes a safety cable suspension point for extra protection.

The thread of the suspension point is a 1/4-20" x 1/2" thread. Bogen offers a cable kit as an optional accessory (CK10) that is suitable for use as the safety cable.

### IMPORTANT

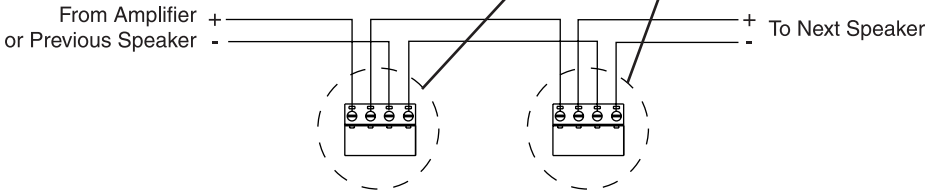
The anchor point, drop cable, and hardware used to hang the speaker must be able to support the speaker's weight under all conditions. **IF YOU ARE NOT SURE OF THE PROPER CAPACITY OF THESE ITEMS TO USE, CONSULT A STRUCTURAL ENGINEER.** Mount only one speaker per supplied quick-snap clip.

# 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 OPS1's snap-lock input connector allows for easy daisy chaining of speakers by providing a second terminal of each polarity. Refer to the figures for proper wiring for daisy chaining of terminals.



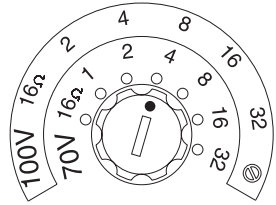
## SPEAKER PHASING

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.

# Selecting Power Levels

The front-mounted selector switch 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 100V systems are labeled on the speakers. On the 100V scale, the last position clockwise is marked with a Ⓢ (not available) symbol. Do not use this position in 100V systems.

## 16Ω 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.

## 25V SYSTEMS

The OPS1 will operate on 25V systems, but at reduced power levels. The chart to the right shows the conversion from a 70V power setting to the actual 25V power level.

70V Setting	32W	4W	25V Power
	16W	2W	
	8W	1W	
	4W	1/2W	
	2W	1/4W	
	1W	1/8W	
16Ω	39W		

# Accessory

## CK10 (CABLE KIT, 10')

The CK10 is a 10-foot cable with one looped end, a forged eye bolt (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.

# Specifications

SPECIFICATIONS	OPS1
<b>Frequency Response (-10 dB)*</b>	60 Hz to 19 kHz
<b>LF Driver</b>	6-1/2" MDT Metal-Alloy Cone (MLS Voice Coil Centering System)
<b>HF Driver</b>	20 mm (3/4") Polycarbonate Dome
<b>Sensitivity (1W/1 M)</b>	89.5 dBspl (Average 100 Hz - 10 kHz)
<b>Impedance Ratings</b>	Low (16 ohms) / High (70V/100V)
<b>Power Input (Max.)</b>	100W @ 16 ohms; 32W @ 70V/100V
<b>Power Settings (in watts)†</b>	70V: 32, 16, 8, 4, 2, 1 100V: 32, 16, 8, 4, 2
<b>Enclosure Material</b>	Fire-rated (94VO) ABS
<b>Grille Material</b>	Powder-Coated Perforated Metal
<b>Terminations</b>	4 Terminal Snap-Lock Input Connector
<b>Product Weight</b>	10 lb.
<b>Speaker Dimensions</b>	15" dia. x 9-1/4" D
<b>Included Accessories</b>	(3) Suspension Cables; (3) Forged Eye Bolts; (3) Nuts; (1) Quick-Snap Clip; (1) Snap-Lock Input Connector
<b>Optional Accessories</b>	Cable Kit (CK10)
<b>Enclosure Finish &amp; Color</b>	Textured White or Black

\* Free Space Response, 16-ohm input

† Front panel, switch-selected.

# Warranty

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Orbit Pendant Speakers are warranted to be free from defects in material or workmanship provided that the product has not been subjected to abuse or accident or altered in any way 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, 50 Spring Street, Ramsey, NJ 07446, 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 misuse, improper storage, neglect, accident, improper installation or have been modified or repaired in any manner that Bogen believes may affect the reliability of the product, or where the serial number or date code has been removed or defaced.

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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.

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