

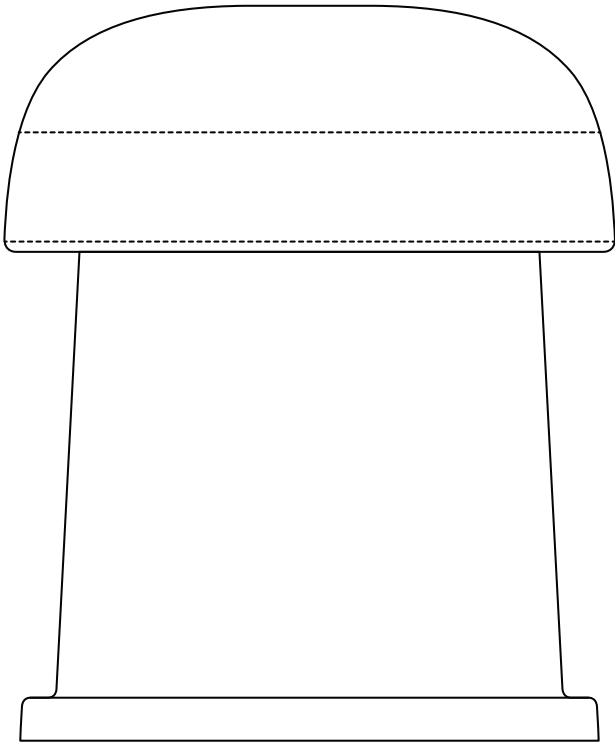
# SONANCE

BEYOND SOUND

OMNI-6T  
OMNIDIRECTIONAL OUTDOOR SPEAKER  
INSTRUCTION MANUAL

# Omnidirectional Outdoor Speaker

OMNI-6T



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## BOX CONTENTS

- (1) OMNI-6T Speaker
- (2) Silicon-Filled Wire Nuts
- (1) Installation Manual

## IMPORTANT SAFETY INSTRUCTIONS

This product is intended to be installed by professional AV integrators and installers only. This product manual is intended to serve as a general guideline for most applications. It is the installer's responsibility to ensure this product is installed in accordance with local building codes and regulations. Consult a local authority for specific requirements, regulations, and building codes of the jurisdiction in which this product is to be installed.

## READ THIS DOCUMENT IN ITS ENTIRETY BEFORE ATTEMPTING INSTALLATION.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Clean only with a dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by Sonance.
9. Refer all servicing to qualified service personnel.

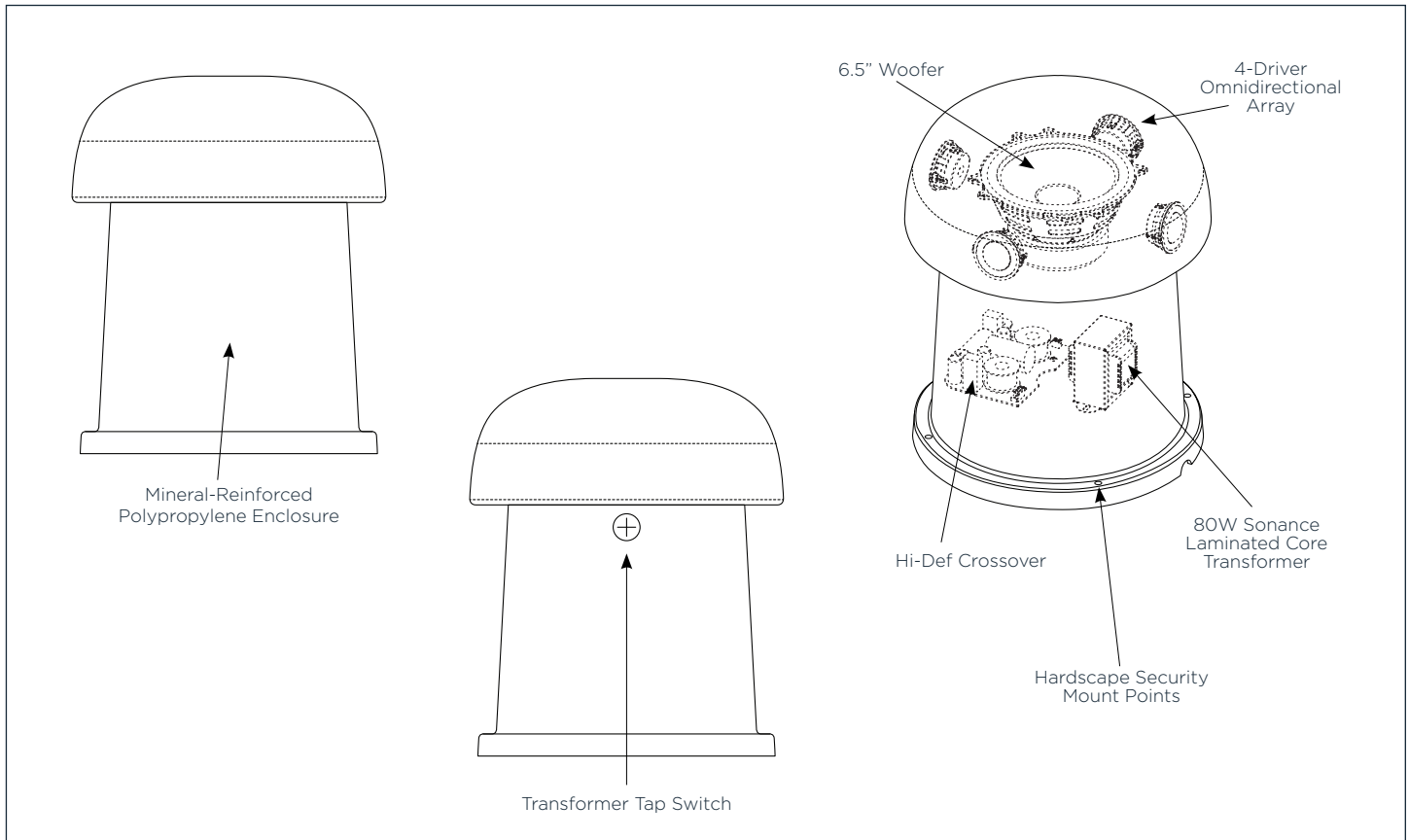
## PRODUCT DESCRIPTION

The Sonance OMNI-6T In-Ground Omnidirectional Speaker utilizes a unique, perimeter-firing driver array paired with an up-firing 6.5" woofer in a discreet, weatherized housing. Exceptional omnidirectional coverage is achieved while maintaining fidelity throughout the midrange and treble via direct radiation of the four wide-band canopy drivers. With the addition of a sealed woofer firing upward and through the speaker's canopy grille, true full-range response is attained with even, broadband omnidirectivity. The small form-factor, earth-tone brown enclosure makes this outdoor speaker remarkably easy to hide in landscaping environments, against soil/mulch, and in the shadows of foliage. Bury the OMNI-6T for optimal performance and security or anchor above ground for hardscape applications (stainless steel mounting hardware not included). An internal 70V/100V high-output transformer allows installation in sprawling properties—especially commercial projects. A side-accessible tap switch provides easy switching between transformer taps and can be bypassed for low-impedance (8 ohm) operation. Used on its own or as part of the Sonance Landscape Series outdoor speaker systems, the OMNI-6T delivers excellent, full-range omnidirectional coverage for efficiently solving coverage challenges and creating immersive, high-fidelity outdoor audio experiences.

## PRODUCT FEATURES

- Wideband, 4-driver array provides true omnidirectional coverage with full fidelity
- Full-range response with up-firing 6.5" woofer
- IP66 rated for all-season use
- 80W 70V/100V transformer with Sonance Laminated Core Technology
- Multiple transformer taps and 8 Ohm bypass settings speed installation time and allow for adjustments even after installation
- Weatherized, earth-tone brown, mineral-filled polypropylene housing makes the OMNI-6T disappear in landscaping and behind foliage
- Bury the speaker in-ground or secure above-ground for flexible installation options
- Use in multiples or as part of the Sonance Landscape Series to complete any professional outdoor audio system

## PRODUCT FEATURES



## PRODUCT PREPARATION

### AMPLIFIER SELECTION

When choosing an amplifier, the maximum number of speakers and the output level of each speaker must be known. The sum of the tap settings should never exceed 80% of the amplifier's rated output. For example, if there are 5 speakers and the taps are set at 20 watts, the load would be 100 watts (5 x 20 watts = 100 watts). To arrive at the needed power for this number of speakers, simply divide the total load by 0.8. In this case, 100 / 0.8 = 125 watts. Therefore, a standard 125 watt amp would safely drive this load. To calculate the amount of usable power an amp offers, simply multiply the rated output by 0.8, i.e., 125 watts x 0.8 = 100 watts.

### WIRE GAUGE - 70V/100V SYSTEM

The most common wire used on commercial 70 volt systems is 18 gauge, 2 conductor, stranded, and jacketed without a shield. For outdoor applications, direct burial type wire is recommended. The wire starts at the amplifier location and is paralleled at each speaker location. Maximum recommended wire length using 18 gauge is up to 700 feet with a 100 watt load. If you double the load (sum of your tap settings), you will reduce the footage by half, to 350 feet. Conversely, if you halve the load, you may double the acceptable wire length, i.e., a 50 watt load is safe over 1400 feet of 18 gauge. Stepping up to 16 gauge wire extends the allowable run length by approximately 35%. For example, a 100 watt load can go 700 feet on 18 gauge; the same load may be placed on 1100 feet of 16 gauge.

### WIRE GAUGE - 8 OHM SYSTEM

When using the product in an 8 Ohm system, the total wire resistance should be less than 10% of the speaker impedance. The speakers are nominally 6 Ohms impedance, so your total wire resistance should be no more than 0.6 Ohms. In simple terms, the extra resistance from the wire will have a very negative affect on the sound quality of the speaker. The sound can be less dynamic, definition of bass frequencies can be reduced, and in extreme cases, the high frequencies can be attenuated. Amplifier power is also wasted in the wire, reducing the maximum output level of the system. Please refer to the following chart (Figure 1) when deciding on the appropriate wire gauge for your installation.

WIRE RESISTANCE IN OHMS VS. LENGTH OF CABLE RUN						
DISTANCE IN FEET	50'	100'	150'	200'	250'	300'
<b>20 GAUGE</b>	.86	1.73	2.59	3.45	4.32	5.18
<b>18 GAUGE</b>	.65	1.30	1.94	2.59	3.24	3.89
<b>16 GAUGE</b>	.43	.85	1.28	1.71	2.14	2.56
<b>14 GAUGE</b>	.27	.54	.81	1.08	1.35	1.62
<b>12 GAUGE</b>	.17	.34	.51	.68	.85	1.02

Figure 1: Wire Resistance

## INSTALLATION

In a typical 70V/100V mono configuration, multiple OMNI-6T units can be wired in parallel along a single 2-conductor wire. Alternatively, a 4-conductor wire can be used to alternate left and right channels for a stereo configuration.

NOTE: Before placing speakers in their final locations, ensure that each tap is set to the appropriate 70V/100V or 8 Ohm setting (Figure 2). Never connect multiple speakers set at 70V/100V and 8 Ohm to the same circuit.

### ADJUSTING THE TRANSFORMER TAP SETTINGS

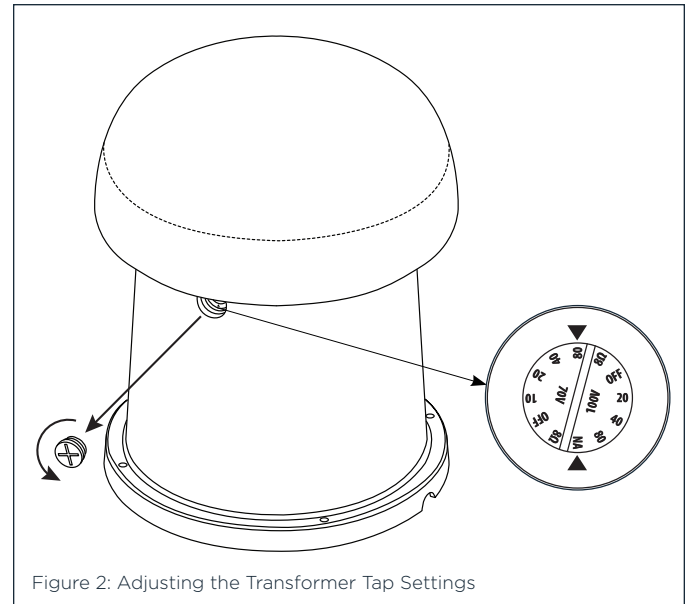


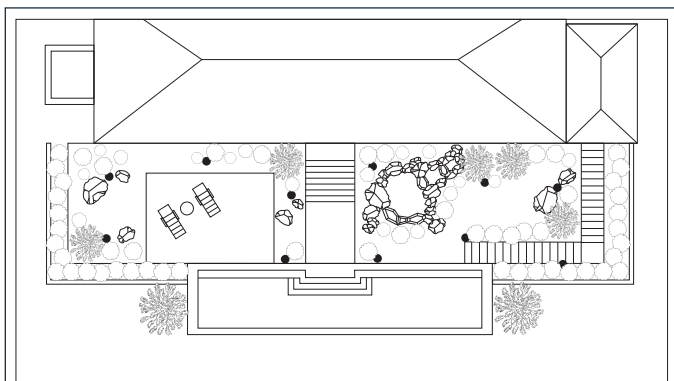
Figure 2: Adjusting the Transformer Tap Settings

IMPORTANT: This product is IP66-rated for use in harsh outdoor environments. Nevertheless, careful placement of the speakers to reduce exposure to direct water spray is recommended.

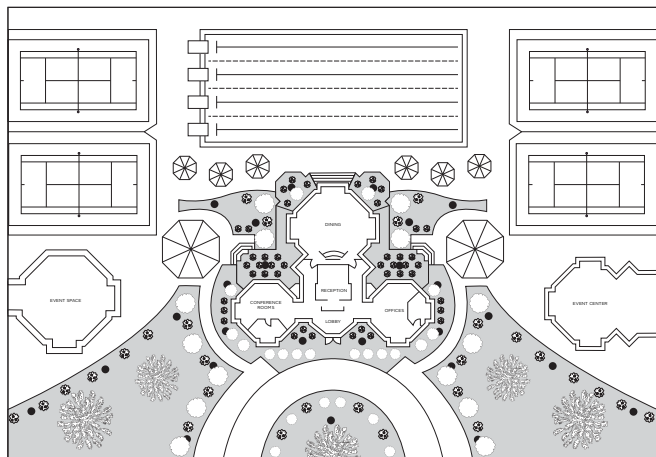
CAUTION: The amplifier should not be connected to AC power until all speaker wire connections are completed. 70V/100V amplifiers present a serious shock hazard.

### SPEAKER PLACEMENT

The Omni-6T is designed to deliver a seamless, 360 degree omnidirectional sound field in an open air environment. An array of multiple speakers should be strategically placed to minimize 'hot spots' and 'nulls' as you move around the outdoor entertainment area. Recommended placement of the Omni-6T speakers is every 10-15 ft (3-4.5m) around the area of coverage. The shorter spacing is recommended for higher SPL and closer listening applications (Figure 3). For optimal performance and visual integration into softscaping, bury each speaker 6-8 inches (Figure 4). In hardscaping applications, use the four 1/4" (6mm) mounting holes in the base to secure the speaker onto its installation surface (stainless steel mounting hardware not included).



Residential Speaker Placement



Commercial Speaker Placement

Figure 3: Speaker Placement

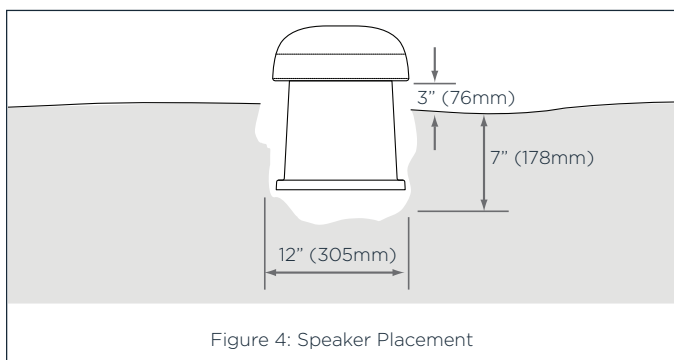


Figure 4: Speaker Placement

## MONO CONFIGURATION

1. Run a single direct burial type 2-conductor wire from the amplifier's location out to the furthest speaker location, passing through each speaker location along the way. Leave an extra 12-18" of wire at each speaker location for making your speaker connections.

2. Prepare the wires to be connected by stripping back the insulation to expose approximately 1/2" of copper. Combine the positive (+) wires from the amplifier, the speaker, and the line running to the next speaker. Using the included silicone filled wire nuts, twist the wires together ensuring that no copper is exposed (Figure 5). Repeat the same process for the negative (-) wires.

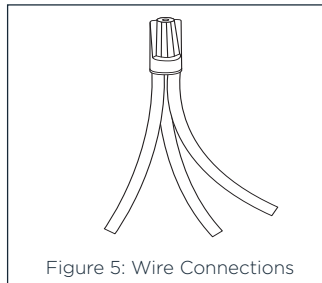


Figure 5: Wire Connections

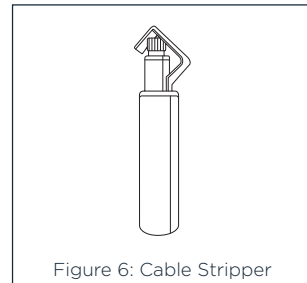


Figure 6: Cable Stripper

3. When both connections at the speaker are complete, use a zip tie to manage the extra slack and provide strain relief to the connection.
4. Place the speaker over the completed wire connections.
5. Repeat steps 2 through 4 at each speaker location. See the AMPLIFIER CONNECTIONS SECTION for more detailed wiring diagrams.

## ALTERNATING LEFT/RIGHT STEREO CONFIGURATION

1. Run a single direct burial type 4-conductor wire from the amplifier's location out to the furthest speaker location, passing through each speaker location along the way. Leave an extra 12-18" of wire at each speaker location for making your speaker connections.
2. Using a radial cable stripper (Figure 6), prepare the wires to be connected by stripping back the outer jacket to expose the four individual wires (Figure 7). Assuming the first speaker is designated as the Left channel, cut the Left (+) and Left (-) wires (typically white/green) (Figure 8). Combine the positive (+) wires from the amplifier, the speaker, and the line running to the next speaker. Using the included silicone filled wire nuts, twist the wires together ensuring that no copper is exposed. Repeat the same process for the negative (-) wires. The other two wires should be left intact, as they will be used at the next speaker.

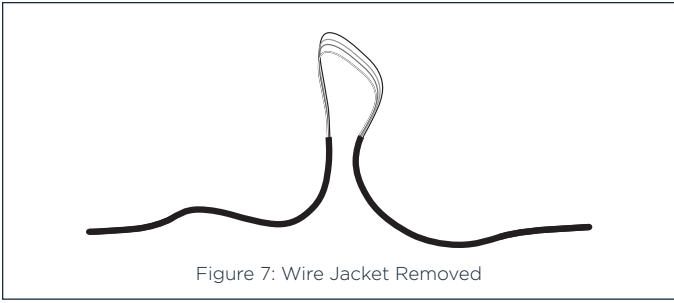


Figure 7: Wire Jacket Removed

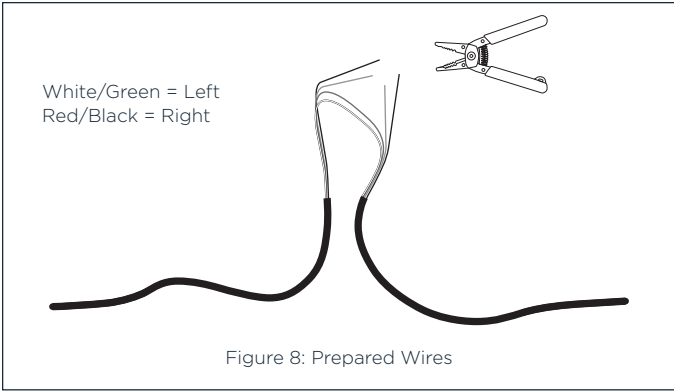


Figure 8: Prepared Wires

3. When both connections at the speaker are complete, use a wire tie to manage the extra slack and provide strain relief to the connection.
4. Place the speaker over the completed wire connections.
5. Repeat steps 2 through 5 at each speaker location. Alternate between using the left channel wires (white/green) and the right channel wires (red/black). See the AMPLIFIER CONNECTIONS SECTION for more detailed wiring diagrams.

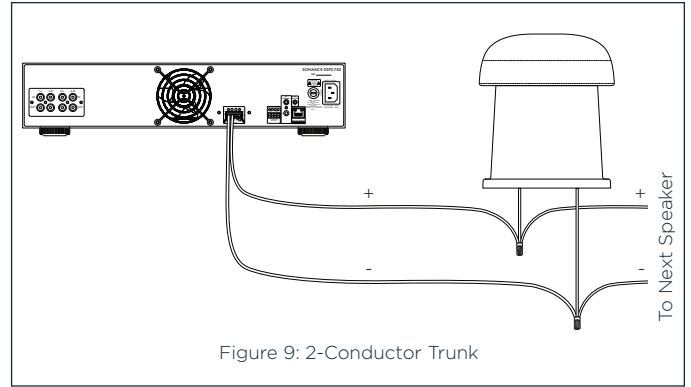


Figure 9: 2-Conductor Trunk

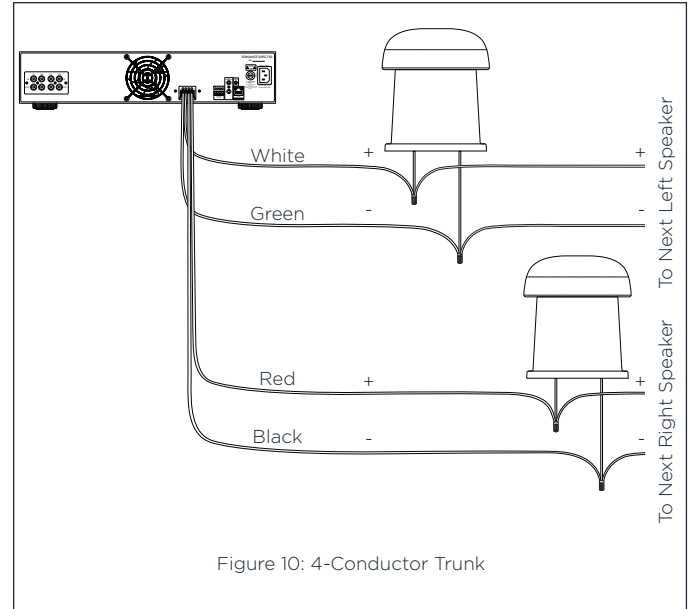
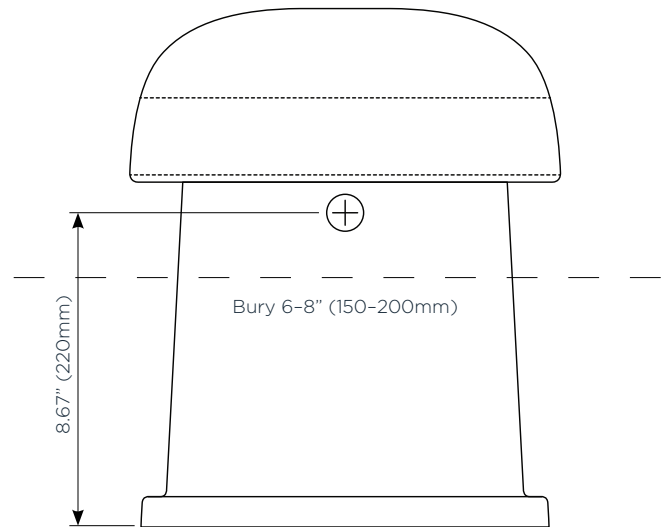
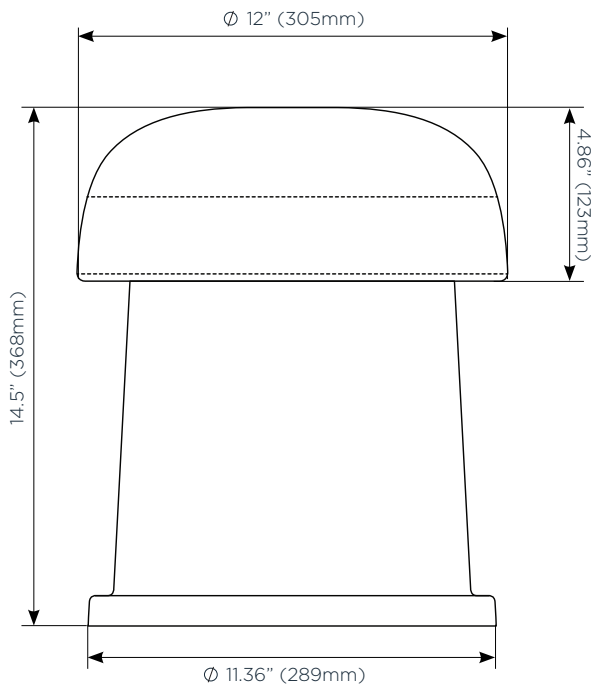


Figure 10: 4-Conductor Trunk

## AMPLIFIER CONNECTIONS

Once all speaker connections have been completed, connect the 2-conductor or 4-conductor wire to your amplifier. Take care to ensure that no excess copper strands are exposed to prevent shorting or other dangerous electrical hazards.

Connect an audio source to the amplifier. Power on the amplifier and test the speakers.



## SPECIFICATIONS

Frequency Range	(-10dB) 35Hz - 25kHz
Frequency Range	(-3dB) 60Hz - 20kHz
Power Capacity	120 Watts Continuous Program Power   60 Watts Continuous Pink Noise
Nominal Sensitivity	88 dB
Nominal Coverage Angle	360 Degrees Horizontal Coverage, 160 Degrees Vertical Coverage
Rated Maximum SPL	107dB @ 1 Meter (3.3 feet) Average, 133dB Peak
Rated Impedance	8 Ohms Nominal, 6 Ohms Minimum
Transformer Taps	80W, 40W, 20W and (10W @70V)
Crossover Point	500Hz
LF Driver	6.5" (165mm) Polypropylene Cone, Santoprene Rubber Surround
Wide Band Driver	Four 1.25" (32mm) EPDM Dome, Ferrofluid Cooled
Input Connectors	Flying Leads
Environmental	Conforms to Mil Spec 810 for Humidity, IEC 529, IP-66
Included Accessories	Silicon Filled Wire Nuts
Dimension HxDia	14.5" x 12" (368mm x 305mm)
Weight	14.6 lbs (6.62kg)
Color	Landscape Brown

## OMNI-6T ARCHITECTURAL SPECIFICATIONS

### 70V/100V/8 Ohm Selectable 6.5" Omni-Directional Outdoor Loudspeaker

The loudspeaker shall deliver 360 degrees horizontal, 160 degrees vertical coverage and consist of a 6.5" (165mm) Polypropylene cone, Santoprene rubber surround Woofer and 4 x 1.25" (32mm) EPDM dome, Ferrofluid cooled Wide Band Drivers, with a crossover point of 500Hz. Frequency range shall be 60Hz - 20kHz (-3dB). Total power handling shall be 120 Watts continuous program power, 60 Watts continuous pink noise. Nominal sensitivity should be rated at 88dB, and it should have a rated maximum SPL of 107dB @ 1 meter (3.3 feet) average, 113dB peak. The unit shall be supplied with a line-matching transformer suitable for 100 volt or 70 volt with a side-mounted control allowing user selectable power taps of 80W, 40W, 20W and (10W @70V) and an 8 Ohm bypass. The loudspeaker should be finished in a dark brown color and shall conform to Mil Spec 810 for humidity, salt spray, temperature and UV, have IEC 529 and an IP-66 waterproof rating. The loudspeaker shall be the Sonance Omni-6T. No other system shall be acceptable unless the above combined performance specifications are equaled or exceeded.

## TECHNICAL ASSISTANCE AND SERVICE

The Technical Assistance Department at Sonance is available at (949) 492-7777 to answer any questions concerning the operation and installation of your speakers between the hours of 7:00 AM and 5:00 PM Pacific time, Monday through Friday, except holidays.

In the event your unit should need repair or service, you may return the unit to your authorized dealer or use the following guidelines:

### PLEASE KEEP ORIGINAL PACKAGING WHEN POSSIBLE.

1. Be prepared to state the model number and / or serial number, date of purchase, and dealer's name and address when calling.
2. Contact Sonance directly at (949) 492-7777 or at [www.sonance.com](http://www.sonance.com). **YOU MUST HAVE PRIOR AUTHORIZATION TO RETURN YOUR UNIT.**
3. If you are returning the product directly to Sonance, call us to obtain a return authorization number (RMA) before shipping.
4. Ship the product via United Parcel Service, Federal Express, or other package delivery service. Please do not use the U.S. Postal Service.
5. Include the return authorization number on the shipping label. Please do not write the RMA number directly on the carton.
6. Ship to:

Attn: Quality Assurance Department  
RMA# (include RMA number here)  
Sonance  
11016 Mulberry Ave.  
Suite B  
Fontana, CA 92337



## LIMITED FIVE (5) YEAR WARRANTY

Sonance warrants to the first end-user purchaser that this Sonance-brand product ("Product"), when purchased from an authorized Sonance Dealer/Distributor, will be free from defective workmanship and materials for the period stated below. Sonance will at its option and expense during the warranty period, either repair the defect or replace the Product with a new or remanufactured Product or a reasonable equivalent.

### EXCLUSIONS

**TO THE EXTENT PERMITTED BY LAW, THE WARRANTY SET FORTH ABOVE IS IN LIEU OF, AND EXCLUSIVE OF, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY SONANCE. ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, IMPLIED WARRANTY OF FITNESS FOR USE, AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY EXCLUDED.**

No one is authorized to make or modify any warranties on behalf of Sonance. The warranty stated above is the sole and exclusive remedy and Sonance's performance shall constitute full and final satisfaction of all obligations, liabilities and claims with respect to the Product.

**IN ANY EVENT, SONANCE SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, ECONOMIC, PROPERTY, BODILY INJURY, OR PERSONAL INJURY DAMAGES ARISING FROM THE PRODUCT, ANY BREACH OF THIS WARRANTY OR OTHERWISE.**

This warranty statement gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion of implied warranties or limitations of remedies, so the above exclusions and limitations may not apply. If your state does not allow disclaimer of implied warranties, the duration of such implied warranties is limited to period of Sonance's express warranty. Your Product Model and Description: OMNI-6T. Warranty Period for this Product: Five (5) years from the date on the original sales receipt or invoice or other satisfactory proof of purchase. Additional Limitations and Exclusions from Warranty Coverage: The warranty described above is non-transferable, applies only to the initial installation of the Product, does not include installation of any repaired or replaced Product, does not include damage to allied or associated equipment which may result for any reason from use with this Product, and does not include labor or parts caused by accident, disaster, negligence, improper installation, misuse (e.g. overdriving the amplifier or speaker, excessive heat, cold or humidity), or from service or repair which has not been authorized by Sonance. Obtaining Authorized Service: To qualify for the warranty, you must contact your authorized Sonance Dealer/Installer or call Sonance Customer Service at (949) 492-7777 within the warranty period, must obtain a return merchandise number (RMA), and must deliver the Product to Sonance shipping prepaid during the warranty period, together with the original sales receipt, or invoice or other satisfactory proof of purchase.

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