SONARRAY SR1 SYSTEM

INSTRUCTION MANUAL

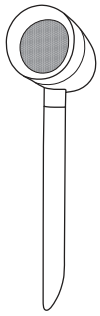
SONARRAY SR1 SYSTEM INSTRUCTION MANUAL

Introduction

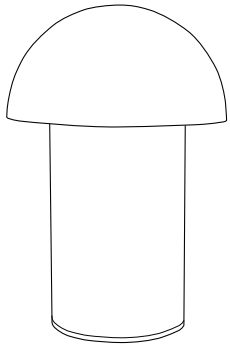
Thank you for purchasing the **SONARRAY SR1 SYSTEM** speakers. When properly installed, these speakers will provide you with years of outdoor entertainment pleasure. To get the most out of your new speakers, please read this manual thoroughly before you begin installation.

Box Contents

SONARRAY SR1 SYSTEM box contains:
(8) Satellite Speakers
(1) In-Ground Subwoofer
(24) Silicone Filled Wire Nuts



SR1 SAT
Satellite Speaker



SR1 SUB
In-Ground Subwoofer

Speaker Layout Planning

The **SONARRAY SR1 SYSTEM** is designed to deliver a seamless, evenly dispersed sound field in an 'open air' environment. An array of multiple satellite speakers and a subwoofer should be strategically placed to minimize 'hot spots' and 'cold spots' as you move around the outdoor entertainment area. See Figure 1.

The satellites speakers should be placed from 6 to 8 feet (1.8 - 2.4 meters) apart for best coverage. To achieve the best balance between the satellites and subwoofer, the subwoofer should be placed as close to the center of the satellites as possible. If more bass is required, placing the subwoofer near a wall or other solid structure will greatly reinforce the low bass frequencies. In some cases you may want to place the subwoofer closer to your primary listening position.

The satellites in the **SONARRAY SR1 SYSTEM** individually present a 30 ohm load to the amplifier. When 4 of them are connected on each amplifier channel in parallel, the load to the amplifier is approximately 7.5 ohms. The satellites and subwoofer both feature internal crossovers so the subwoofers impedance is not combined with the satellites. The overall load presented to your amplifier by the **SONARRAY SR1 SYSTEM** will be around 7.5 ohms nominal.

NOTE: The SONARRAY SR1 SYSTEM is capable of expansion for a total of 16 satellite speakers and 2 subwoofers. For greater coverage, add an additional SR1 System or any combination of SR1 SAT 4 Packs and SR1 SUB.

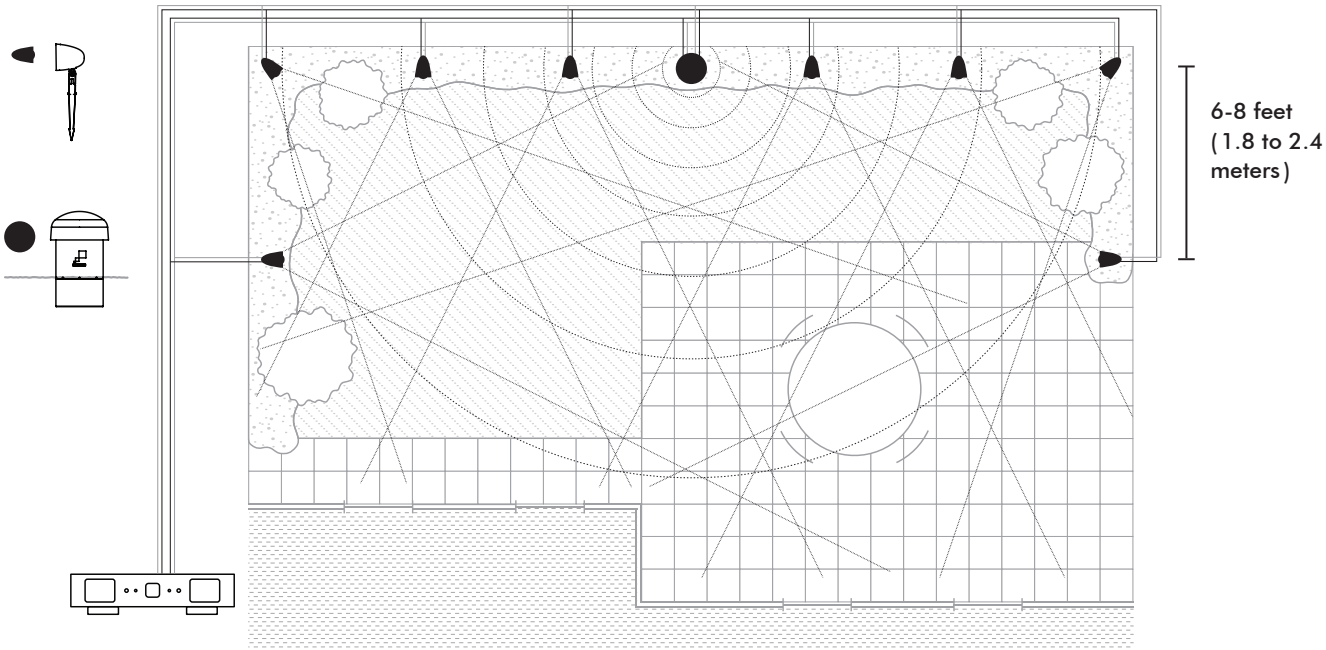


Figure 1

Types of wire

Color-coded, 14/4 direct-burial speaker wire is recommended.

NOTE: Please refer to the wiring chart below to determine which size wire to use over a given distance.

WIRE GAUGE CHART	
WIRE GAUGE	DISTANCE
18 Gauge	Up to 100 feet (30 meters)
16 Gauge	Up to 150 feet (45 meters)
14 Gauge	Up to 250 feet (80 meters)
12 Gauge	Up to 400 feet (122 meters)
10 Gauge	Up to 650 feet (198 meters)

BEST PRACTICE: '14/4' refers to 14 gauge, 4-conductor wire. It is important to use only 'direct burial' wire to maintain long-term signal integrity and prevent corrosion from occurring to the wire. Using individual conductors with different colors makes it easy to identify and access both amplifier channels. Low voltage lighting wire can also be used but is only sold as a 2 conductor wire. If using a 2 conductor wire, then run two pairs of wires; one for each amplifier channel (Right/Left).

Speaker Installation

1. Place the 8 satellites and 1 subwoofer in their approximate final locations.
2. Dig a 4" to 5" trench to run the speaker wires in.
3. Starting at the amp location or wire connection point, run the speaker wire through the trench to the first speaker location.

Connecting the Speakers

The **SONARRAY SR1 SYSTEM** allows the satellite speakers to be wired together in a parallel-daisy chain configuration. In a typical system with one zone of audio, simply run a 4 conductor wire from the amplifier or connection point to the closest speaker. Once you have designated the first speaker as either left or right, continue alternating the wires between the left and right channels creating a daisy chain of stereo satellites. See figure 2.

SONARRAY SR1 SYSTEM Wiring Diagram 8 ohm

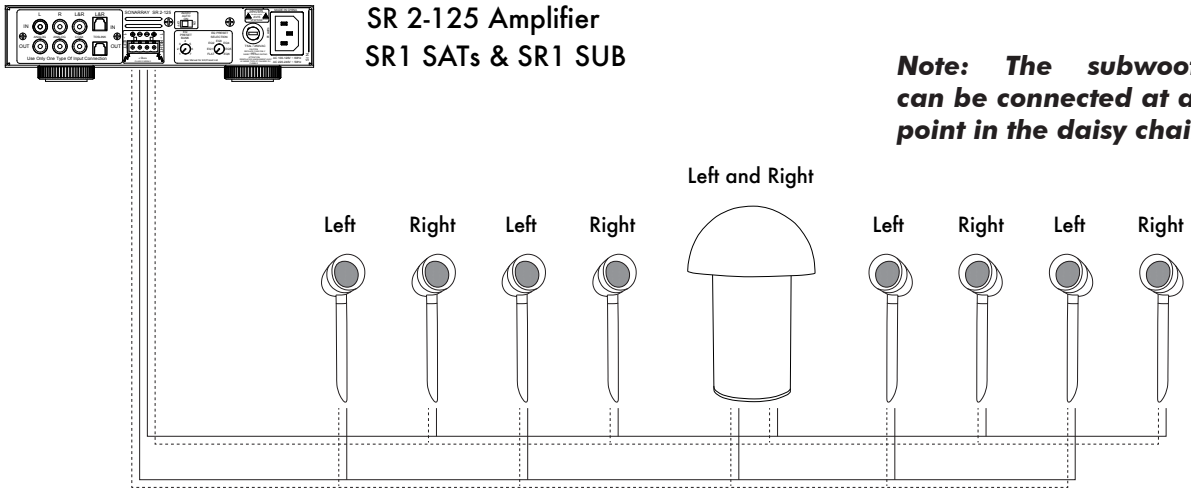
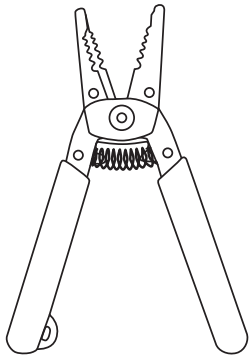


Figure 2

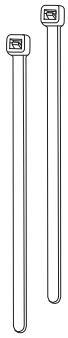
Recommended tools you will need

1. **Wire Strippers** that will accommodate up to 12 gauge wire.



2. **Round Cable Stripper**
(Needed when using 14/4 direct burial wire.)

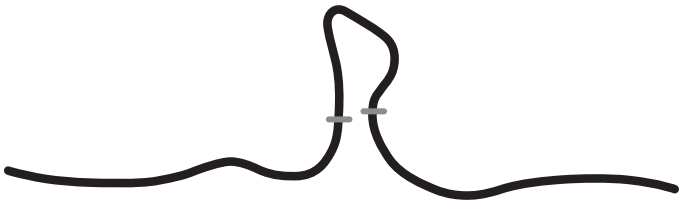
3. **Wire Ties**



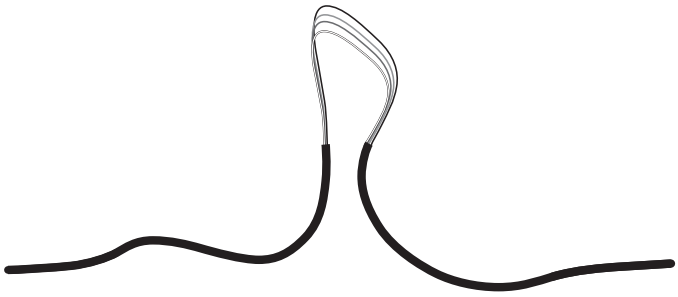
Satellite Wire Connection

Connecting the speakers using 14/4 direct burial speaker wire.

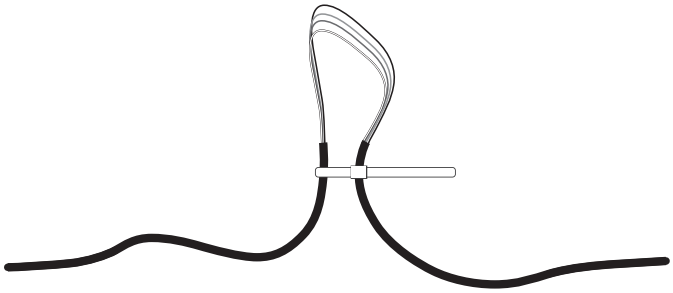
1. Pull the 14/4 wire on the spool to the furthest speaker location. Leave the wire attached to the spool until the last speaker has been connected.
2. Starting at the first speaker and every speaker that follows, create a loop of wire approximately 6" in length.



3. Use the Round Cable Stripper to remove the outside protective wire jacket to expose the 4 individual color-coded wires. If you are unfamiliar with using a Round Cable Stripper, please go to YouTube and search for videos on 'Using a Round Cable Stripper'. Or, visit the specific brand of Cable Stripper's company website for detailed instructions.

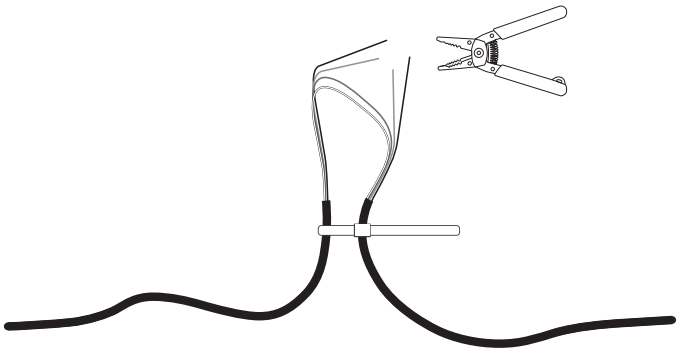


4. Use a wire tie to keep the wire loop intact and act as a strain relief.

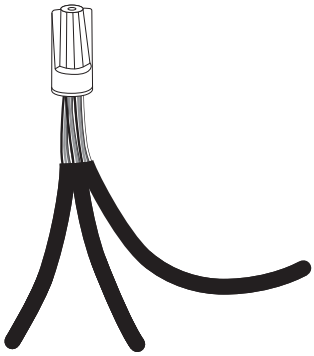


PLEASE NOTE: regarding the 4 colored wires, the Red (+) and Black (-) are used for the Right channel, White (+) and Green (-) for the Left channel.

5. Cutting the wires. In this example, we want the first speaker to be connected to the right channel so we cut the Red (+) and Black (-) wires only. Leave the White and Green wires intact.



6. Strip off 1 inch (25.4mm) of insulation on Red and Black wires to expose the copper conductor. Combine and twist the Red wires from the amplifier, the first satellite and the wire run running to the next speaker in a clock-wise motion.
7. Secure these three wires using the provided Silicone Filled Wire Nuts.

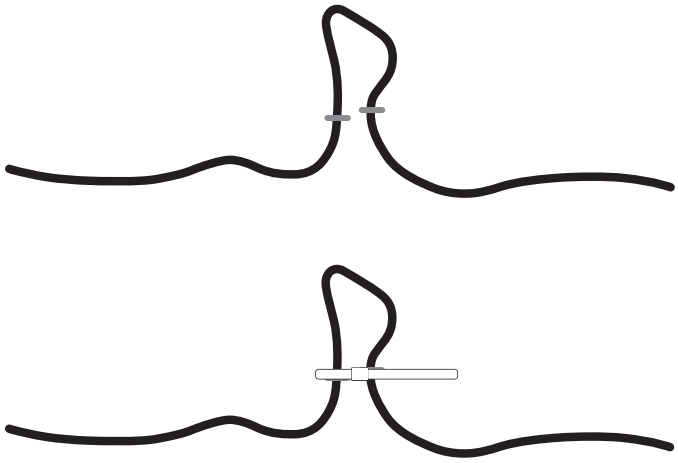


8. Repeat steps 6 & 7 for the black wires.
9. At the next speaker, repeat steps 2 – 7 for the left channel using the White (+) and Green (-) leaving the Red (+) and Black (-) wires intact.
10. Continue the above steps for the remaining 6 speakers in the daisy-chain. See figure 2 (on page 3).

IMPORTANT: Be sure only 4 satellite speakers are connected to each amp channel; mis-wiring may result in an unpredictable load which could damage your amplifier.

Connecting the speakers using a 2-conductor wire or low voltage lighting wire.

1. Pull the first pair of 2-conductor wire to the furthest speaker location, leaving it connected to the spool.
2. Starting at the first speaker and every other speaker that follows create a loop of wire approximately 6" in length, securing the loop with a wire tie.



3. Cut the wire at the last speaker location in the daisy-chain.
4. Take the spool back to the starting point and pull a second 2-conductor wire to the furthest speaker location. See figure 3.
5. Starting with the first speaker, cut the wire loop.

NOTE: If not using color-coded wire, notice that one of the wires out of the pair will have different texture or printing on it. This will help identify and separate the (+) from the (-). For simplicity, use the wire with texture or writing as the (+) and the other as the (-). Use this polarity standard when connecting all the speakers.

6. Strip the insulation on each wire to expose approximately 1" of copper. Combine and twist the all the positive (+) wires together in a clockwise motion. Repeat this step for all the negative (-) wires.
7. Secure the three wires together using the provided Silicone Filled Wire Nuts. (See Figure 4.)
8. Repeat steps 5– 7 for the remainder of the speakers.

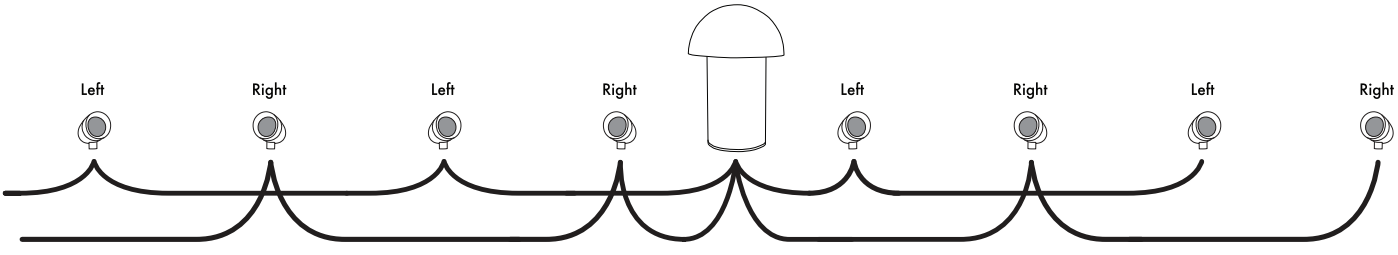


Figure 3

Subwoofer Wire Connection

The subwoofer features a dual voice coil driver with 4 wires, one pair for each of the amplifier channels. Red (+) and Black (-) are used for the right channel, White (+) and Green (-) for the Left channel. The subwoofer can be connected at any point along the daisy chain e.g. beginning, middle, end or anywhere in-between. However, locating the subwoofer mid-way in the daisy chain will produce an equal amount of bass for the speakers on either side of the sub. The subwoofer needs to be connected in the same manner as the satellites speakers. (See Figure 5.)

IMPORTANT: The subwoofer uses a dual voice coil woofer, it is critical that the positive and negative wires be connected correctly for both channels. If either channel is connected incorrectly no low frequency sound will be produced.

After all satellites and subwoofer connections are completed, connect the wires to your receiver or amplifier. See Figure 2 (on page 3) & Figure 4 for reference.

IMPORTANT: Be sure not to let any stray'+' and'-' strands touch each other. Touching strands will cause a short-circuit which could damage your amplifier.

Turn your receiver or amplifier 'On' and test the system with your favorite music. If the speakers are operating properly, refill the wire trench and enjoy your new speakers.

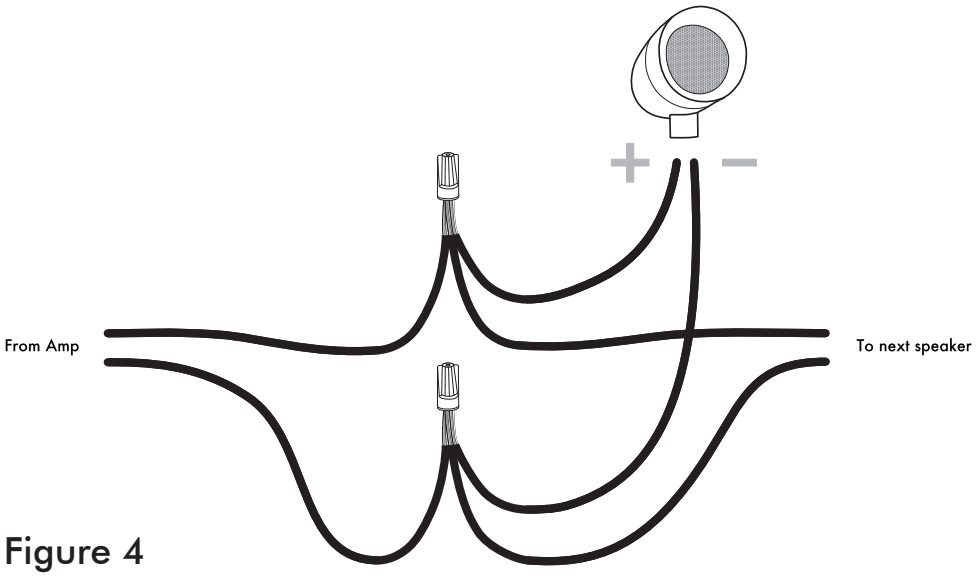


Figure 4

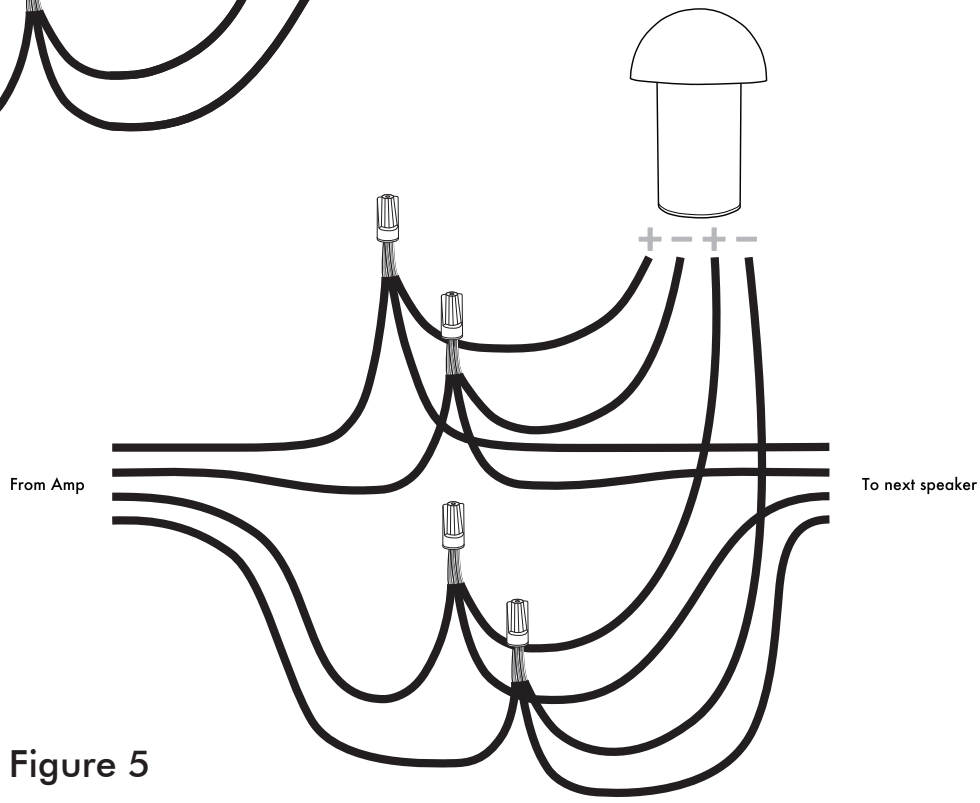


Figure 5

SONARRAY SR1 SYSTEM SPECIFICATIONS

S4SAT (Quantity 8):	3.5" (98mm) anodized aluminum cone & Santoprene surround
S4SAT Dimensions:	6.5" L x 4.125" Dia. (165mm x 105mm)
S8SUB (Quantity 1):	8" (203mm) dual voice coil, polypropylene & Santoprene surround
S8SUB Dimensions:	22" L x 15" Dia. (559mm x 381mm)
System Impedance:	8 ohms per channel nominal
Frequency Response:	40Hz-20kHz +/- 3dB
Crossover Frequency:	100Hz
Power Handling:	50 watts minimum - 150 watts system*
Sensitivity:	85dB and 89dB Sensitivity (satellite and subwoofer respectively), 2.83V / 1 meter
Satellite Dispersion & Throw:	60º dispersion with an optimum listening area 8'-20' (2.4-6.1 meters) from the satellites
Placement Recommendations:	Satellites- 6'-8' (1.8-2.4 meters) apart along perimeter of listening area Woofer- The center of the eight satellites
Enclosure Material:	Satellites- Non-corrosive sealed enclosures Woofer- (HDPE) non-corrosive sealed enclosure
Included Accessories:	Eight ground stakes, 24 Silicone filled wire nuts
Listening Area:	Up to 2500 square feet (232 square meters) (depending on area layout)*
Wire Recommendations:	18 gauge – up to 100 feet (30 meters) 4 conductor, stranded, direct burial 16 gauge – up to 150 feet (45 meters) 4 conductor, stranded, direct burial 14 gauge – up to 250 feet (80 meters) 4 conductor, stranded, direct burial 12 gauge – up to 400 feet (122 meters) 4 conductor, stranded, direct burial 10 gauge – up to 650 feet (198 meters) 4 conductor, stranded, direct burial

*Visit our Website to view the SONARRAY Sound Coverage Calculator.
Specifications subject to change. Direct burial cable required (sold separately). Silicone filled wire nuts included.

LIMITED THREE (3) YEAR WARRANTY

SONARRAY warrants to the first end-user purchaser that this SONARRAY product (SONARRAY SR1 System), when purchased from an authorized SONARRAY Dealer/Distributor, will be free from defective workmanship and materials for the period stated below. SONARRAY 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 SONARRAY. 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 SONARRAY. The warranty stated above is the sole and exclusive remedy and SONARRAY's performance shall constitute full and final satisfaction of all obligations, liabilities and claims with respect to the Product.

IN ANY EVENT, SONARRAY 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 SONARRAY's express warranty.

Your Product Model and Description: SONARRAY S4SAT speakers and S8SUB In-Ground Subwoofer.

Warranty Period for this Product: Three (3) 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 or cold or humidity, outdoor installation), 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.

991 Calle Amanecer | San Clemente, CA 92673 USA
(949) 492-7777 | **www.sonance.com/outdoor/sonarray**

SONARRAY is a registered trademark of Ambisonic Systems LLC, Sonance is a trademark of Dana Innovations, registered in the U.S. and other countries.
Copyright 2013, all rights reserved. Patent pending. Due to continuous product improvement, all features and specifications are subject to change without notice.

33-5837 04.06.17