

AMBISONIC



LSR80 | LSR60 | LSR40

LANDSCAPE SATELLITE SPEAKERS • MANUAL



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1. INTRODUCTION

Congratulations on selecting our LSR40 | LSR60 | LSR80 Immersive HD Landscape Series Satellite Speakers.

At Ambisonic, we take pride in providing you with a high quality product, all speakers are designed to have excellent sound quality, longevity, and a simple installation process. When properly installed, these speakers will provide you with years of the ultimate in high fidelity outdoor audio.

This instruction booklet covers the necessary information for a smooth installation, including: the tools you will need, step-by-step instructions for installation, troubleshooting tips for any errors that may occur, and all warranty information.

If for any reason you experience problems or if you have installation questions please call us at (844) 674-4461. Hours of operation are 8:00am to 5:00pm (PacificTime), Monday through Friday.



2. SPECIFICATIONS

SPECIFICATIONS LSR80 (Product SKU: LSR80)

System Type Ribbon Equipped Landscape Satellite Loudspeaker

Driver Components All-Weather 6" Glass Fiber Cone Woofer

3.1" Planar Magnetic Ribbon Driver

Frequency Response 70Hz - 20kHz (-10db) | 100Hhz - 20kHz (+/- 3db)

SPL 109dB Continuous

System Coverage 140° Horizontal | 60° Vertical

Sensitivity, 1m/2.83V 89dB

Power Handling 100W RMS

Impedance | Transformer8 Ohm | 70 Volt / 100W TransformerInput Connectors24" x 14 AWG Pigtail with Waterproof Wire-nuts

Enclosure Material Color-molded Composite

Satellite Dimensions 10.70" H x 8" W x 12.50" L

(272 mm H) x (203 mm W) x (318 mm L)

SPECIFICATIONS LSR60 (Product SKU: OLSR6000)

System Type Ribbon Equipped Landscape Satellite Loudspeaker

Driver Components All-Weather 5 1/4" Glass Fiber Cone Woofer

2.8" Planar Magnetic Ribbon Driver

Frequency Response 95Hz - 20kHz (-10db) | 125Hhz - 20kHz (+/- 3db)

SPL 106dB Continuous

System Coverage 140° Horizontal | 60° Vertical

Sensitivity, 1m/2.83V 88dB Power Handling 75W RMS

Impedance | Transformer 8 Ohm | 70 Volt / 75W Transformer

Input Connectors 24" x 14 AWG Pigtail with Waterproof Wire-nuts

Enclosure Material Color-molded Composite **Satellite Dimensions** 8.75" H x 6.64" W x 10.38" L

(222 mm H) x (168mm W) x (263 mm L)

^{*}All product specifications are subject to change. Please refer to ambisonicsystems.com for latest information.

SPECIFICATIONS	LSR40 (Product SKU: OLSR4000)
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System Type Ribbon Equipped Landscape Satellite Loudspeaker

Driver Components All-Weather 3 ½" Glass Fiber Cone Woofer

1" Round Planar Magnetic Ribbon Driver

Frequency Response 110Hz - 20kHz (-10db) | 150Hhz - 20kHz (+/- 3db)

Max SPL @ 1m 102dB Continuous, 108dB Peak

System Coverage 120° Conical

Sensitivity, 1m/2.83V 85 dB Power Handling 50W RMS

Impedance | Transformer 8 Ohm | 70 Volt / 50W Transformer

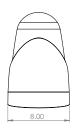
Input Connectors 24" x 14 AWG Pigtail with Waterproof Wire-nuts

Enclosure Material Color-molded Composite **Satellite Dimensions** 6.53" H x 4.13" W x 6.63" L

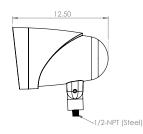
(166 mm H) x (105 mm W) x (168 mm L)

3. LINE DRAWINGS

3A. LSR80

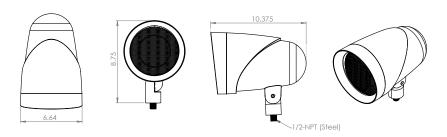




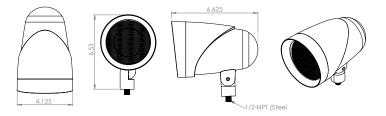




3B. LSR60



3C. LSR40



4. WHAT'S IN THE BOX





High Definiton Ribbon Coaxial 70V | 8 Ohm Speaker



Silicone Filled Wire
Nuts (2)

Features:

- Standard 1/2 NPT for multiple mounting solutions
 (Exterior walls, under eaves, on pillars, in trees or just about anywhere)
- Six Wire Pigtail for 70V or 8Ω wiring. Prewired for 70V.

5. OPTIONAL ACCESSORIES

- 1. Optional LSTM Surface Mount
- 2. Optional LSLS Spike Mount
- 3. Optional LSFM Tree Mount





3.

6. REQUIRED TOOLS

Flat Head Screwdriver
 #4 Allen Key Screwdriver [Min 10" Length]
 OR Electrical Drill with Elbow Attchment
 Shovel

7. SYSTEM LAYOUT

Placement of the speakers throughout the home's exterior will depend on a couple of factors. The first is how uniform of a sound field is required. The laws of physics dictate that the further the listener is from the sound source the lower the apparent sound pressure level or "volume." Because of this there will always be areas with less sound and others with more. A greater number of speakers in the system will always make for more even coverage. The second factor is the desired maximum sound pressure required. Some systems are designed for background or ambient music only, while others are designed to rock the house or provide dance music. Again, the number of speakers will affect the maximum output. Consider creating different zones where louder music is required in one area and softer music in others.

The Immersive HD Landscape Series is designed to deliver a seamless, evenly dispersed sound in an 'open air' environment. An array of multiple speakers and subwoofers should be strategically placed to minimize 'hot spots' and 'nulls' as you move around the outdoor entertainment area. (Recommended minimum distance between speakers is, six (6) feet.

If you are concerned about determining speaker placement, Ambisonic offers a free design service to help you map the optimal speaker placements as well as recommended amplifier power and project scale.

Email: sales@originacoustics.com for more information.

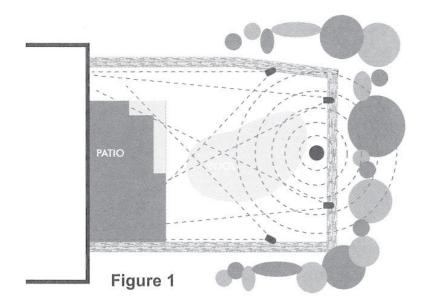
7A. SYSTEM LAYOUT PRECAUTIONS

Once coverage and sound pressure requirements have been determined, the speaker locations can be selected. Before digging, confirm there are no subterranean obstructions such as water or gas lines, sprinkler pipes or electrical conduits.

7B. SPEAKER COVERAGE

It is highly recommended that the speaker locations take into account the acoustical coverage area, according to model:

Model	Speaker Coverage Sq. Ft.
LSR40	500
LSR60	1,000
LSR80	1,000



7C. WIRE SELECTION

IT IS HIGHLY RECOMMEND TO USE <u>14 GAUGE OR LARGER</u> DIRECT BURIAL GRADE WIRE.

8. AMPLIFIER POWER PLANNING

The maximum number of speakers and subwoofers that can be used in a system will depend on the amount of amplifier power available.

WATTAGE CALCULATION

Use the table below to help calculate the appropriate amplifier according to your setup.

MODEL	Quantity Ch 1	Quantity Ch 2	Watts	Total Ch 1	Total Ch 2
LSR40			x 50		
LSR60			x 75		
LSR80			x 100		
10HDR-AW			x 300		
			TOTAL		
			Plus 20%		
	Total Min	Total Minimum Amplifier Power			

8A. AMPLIFIER CAUTION

CAUTION: HIGH POWER AMPLIFIERS PRESENT A SERIOUS SHOCK HAZARD.
THE AMPLIFIER SHOULD NOT BE CONNECTED TO AC POWER UNTIL ALL
CONNECTIONS ARE COMPLETED.

9. MOUNTING ACCESSORY INSTALLATION

1. Once locations have been established, choose the appropriate mounting accessories for the project.

Note: Always use a #4 Allen Key Screwdriver when tuning the vertical angle adjustment screw.

- For placement directly into the ground, use the recommended **LSLS Stake** for each of the **LSR40**, **LSR60** and **LSR80** speakers.
- For applications on surfaces, such as the side of a building or structure, use the model LSFM Round Surface Mount, & see the Instruction Manual included with the LSFM for precise instructions.
- For on-tree Mounting, use the LSTM Tree Mount, & see Instruction Manual included with the LSTM for precise instructions.
- 2. Once the accessories have been mounted at the desired locations, mount the speakers by threading the mounting shaft into the corresponding opening of the accessory.

Note: Attention must be paid to the speaker wires to avoid nicks and cuts that might short the system.

10. SPEAKER INSTALLATION

- 1.. Prepare individual wire leads to be connected to main leads.
- 2. Dig a 4" 5" deep trench to run the speaker wires in.
- 3. Run the wires through the trench from your amplifier to the speaker locations.
- 4. Connect the direct burial wire to each speaker wire, connections should be made with either silicone filled wire connectors or appropriate junction boxes

10A. 70V WIRING GUIDANCE

IMPORTANT: BE SURE NOT TO LET ANY STRAY POSITIVE(+) AND NEGATIVE (-) STRANDS TOUCH EACH OTHER. TOUCHING STRANDS CAN CAUSE A SHORT-CIRCUIT THAT COULD DAMAGE THE AMPLIFIER.

CONFIRM THAT YOU HAVE CONNECTED:

- SPEAKER POSITIVE (+) TO AMPLIFIER POSITIVE(+)
- SPEAKER NEGATIVE (-) TO AMPLIFIER NEGATIVE(-)

10B. 70V Wiring

The LSR40, LSR60, & LSR80 all ship wired for 70V use, simply the connect speaker wires from amplifier to the Red Positive (+) and Black Negative (-) wires. **See Figure Below**.



- 5. After all the speakers connections are completed, connect the wires to the amplifier.
- 6. Connect the amplifier to AC power, turn the amplifier on and test the system with your favorite music. If the speakers are operating properly, refill the wire trench and enjoy your new Immersive HD speakers.

10C. 70V Wiring Overview

70 Volt audio systems allow for speakers to be daisy chained together. In a typical system with one zone of audio you simply run a stereo pair or 4 conductor wire from the amplifier to the closest speaker. Once you have designated your speaker as either left or right, continue alternating the wires between the left and right channels creating a daisy chain of stereo speakers. The Subwoofer can be wired anywhere in the chain.

PARALLEL WIRING SETUP: This means the positive connection on the amplifier will be connected to the positive connection on speaker 1, 2, 3, etc. The negative connection will be connected to the negative connections on the speakers as well. This can be accomplished with a single pair of wires in a "daisy chain" where the amplifier is at one end and the speakers are connected consecutively.

• Alternatively, you can also wire in a star pattern where each speaker is directly wired back to the amplifier.

PLEASE CONTACT AMBISONIC/ ORIGIN CUSTOMER SERVICE FOR ANY INQUIRY REGARDING THE SETUP.

10D. 70V Wiring Diagram (Example)

Example configuration:

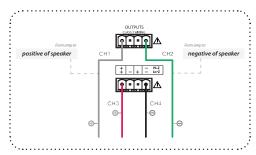
4 x LSR80 Satellites (can connect up to 8 x LSR80 Satellites to the ProA1000.2 Amp)

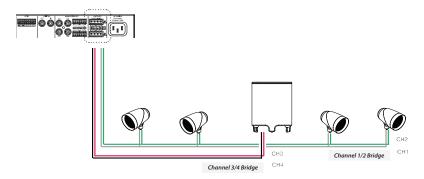
1 x 10HDR-AW Subwoofer (can connect up to 2 x 10HDR-AW to the ProA1000.2 Amp)

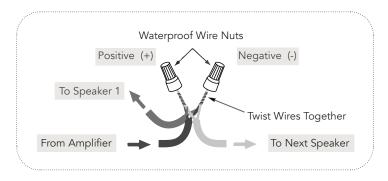
1 x ProA1000.2 Amplifier

Note 1: For the ultimate in high definition, high output system, Ambisonic Systems recommends the use of a separate amplifer channel with DSP for subwoofer; preferably the ProA1000.2 amplifier by Origin PRO.

Note 2: The LSR60 & LSR40 satellites will be connected in the same way when using 70V wiring option.







11A, 8 Ohm WIRING GUIDANCE

For 8 ohm set up:

- 1. Cut the Blue and Yellow wires, and the Brown and Green wires, apart. The Red, Black, Yellow and Green wires are not used for 80hm installation. (This configuration bypasses the 70V transformer).
- 2. Strip and connect the Blue Positive (+) and Brown Negtive (-) wire to the amplifier speaker wires. **See Figure Below**.



IMPORTANT: BE SURE NOT TO LET ANY STRAY POSITIVE(+) AND NEGATIVE (-) STRANDS TOUCH EACH OTHER. TOUCHING STRANDS CAN CAUSE A SHORT-CIRCUIT THAT COULD DAMAGE THE AMPLIFIER.

CONFIRM THAT YOU HAVE CONNECTED:

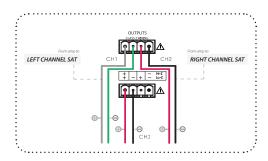
- BLUE SPEAKER WIRE POSITIVE (+) TO AMPLIFIER POSITIVE(+)
- BROWN SPEAKER WIRE NEGATIVE (-) TO AMPLIFIER NEGATIVE(-)
- 3. After all the speakers connections are completed, connect the wires to the amplifier.
- 4. Connect the amplifier to AC power, turn the amplifier on and test the system with your favorite music. If the speakers are operating properly, refill the wire trench and enjoy your new Immersive HD speakers.

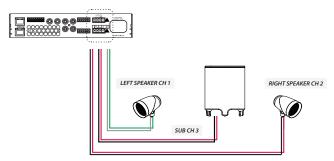
11B. 8 Ohm Wiring Diagram (Example)

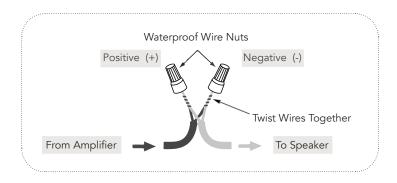
Example configuration:

- 2 x LSR60 | LSR40 Satellites
- 1 x 10HDR-AW Subwoofer
- 1 x ProA250.2 Amplifier

Note: Can connect up to 2 x LSR60 & LSR40 satellites per channel when using 8Ω option and CH3 is using Auto share.





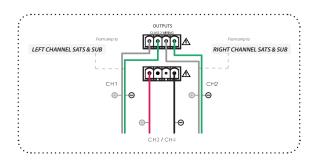


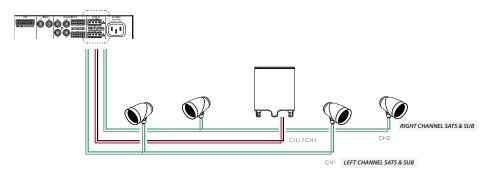
11C. 8 Ohm Wiring Diagram (Example)

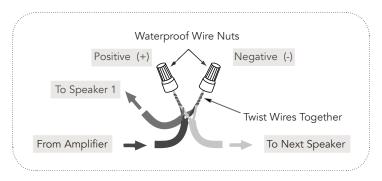
Example configuration:

- 4 x LSR60 | LSR40 Satellites
- 1 x 10HDR-AW Subwoofer
- 1 x ProA1000.2 Amplifier

Note: You can also connect 2 x 10HDR-AW to the ProA100.2 Amp, 1 x Sub on CH3, and the 1 x Sub on CH4 (must remove Bridge option in the Output section of CH3)







12. TROUBLESHOOTING

If you have a problem, try isolating it first. For example, if you're playing a DVD and there is no sound, try replacing the DVD with an MP3 player to see if you get sound. If it does work, then the problem is with the television, DVD player, or the cables connecting them. If it doesn't work, the problem will be with the amplifier, speakers, or those cables.

Problem	Possible Cause
No Sound	The volume may be turned down or muted. Check the volume settings on both the amplifier and the DVD player/television/computer/etc.
No Sound	Make sure the proper source is selected on the amplifier or receiver.
No Sound	Check the cord connecting the amplifier with the source. The cord may be damaged or plugged into the wrong input or output.
No Sound	Check the wires connecting the amplifier with the speakers. Make sure they're connected properly and not damaged in any way.
No Sound	Check the ProA Gain levels using the Origin PRO Web App/GUI
No Sound	Check the ProA Input routing using the Origin PRO Web App/ GUI
Poor Sound Quality	If you hear something like static, or the sound is cutting in and out, check the audio cables. If the problem increases when a cable is being moved, then the cable is most likely faulty or not connected properly.
Poor Sound Quality	Today's audio systems may have several places to adjust the volume, for example your MP3 player may have a volume control, and your amplifier may also have one. Check to be certain that the volume isn't turned up past 80% on any device.
Poor Sound Quality	Try changing sources to be certain that the selection you've chosen is a good quality recording.

AMBISONIC LANDSCAPE SATELLITE SPEAKER

13. TECHNICAL ASSISTANCE

If you have any questions or concerns about installing or using this product, you

can reach us through one of the following methods:

Phone: (844) 674 - 4461

Hours of operation: 8:00am - 5:00pm (Pacific Time), Mon - Fri

Email: sales@originacoustics.com

If you are having technical trouble, please include the model number and briefly

explain what steps you took to resolve the problem in your email, or be prepared

to answer these questions over the phone. If you are considering returning the

product, it's required that you contact Ambisonic prior to any return attempts. This

way we can determine if the issue can be resolved without returning the product,

or if needed we can provide instructions and support for the return process.

14. LIMITED 5 YEAR WARRANTY

Ambisonic warrants to the original retail purchaser only that this Ambisonic product will be free from defects in materials and workmanship, provided the speaker was purchased from an Ambisonic authorized dealer.

If the product is determined to be defective, it will be repaired or replaced at Ambisonic's discretion. If the product must be replaced yet it is no longer manufactured, it will be replaced with a model of equal to or greater value that is the most similar to the original. If this is the case, installing the replacement model may require mounting modifications; Ambisonic will not be responsible for any such related costs.

14A. REQUIREMENTS & WARRANTY COVERAGE

This warranty may not be valid if the product was purchased through an unauthorized dealer. This warranty only applies to the individual that made the original purchase, and it cannot be applied to other purchases. The purchaser must be prepared to provide proof of purchase (receipt). This warranty will not be valid if the identifying number or serial number has been removed, defaced, or altered.

*All warranties and warranty conditions are subject to change.

Please refer to www.ambisonicsystems.com for the latest information.

14B. NOT COVERED BY WARRANTY

- Accidental damage
- Damage caused by abuse or misuse
- Damage caused by attempted repairs/modifications by anyone other than Origin Acoustics or an authorized dealer
- Damage caused by improper installation
- Normal wear, maintenance, and environmental issues
- Damage caused by voltage inputs in excess of the rated maximum of the unit
- Damage inflicted during the return shipment
- Performance issues caused by modifications. ie: painting of the shell.

15. RETURN PROCESS

Before making any return attempts, it is required that you first contact Ambisonic/ Origin Acoustics' customer support team. Return product to Ambisonic or your dealer, either in person or by mail. It's preferable if the product is returned in the original packaging. If this isn't possible, the customer is responsible for insuring the shipment for the full value of the product.

This warranty is in lieu of all other expressed or implied warranties. Some states do not allow limitations on implied warranties, so this may not apply depending on the customer's location. (For more information, see Magnuson-Moss Warranty Act.)



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