



# LANDSCAPE 70V

SATELLITES & SUBWOOFERS • INSTALLATION MANUAL



LS44



LS64



OSUB12



OSUB10



OSUB8

LS64 • LS44 • OSUB12 • OSUB10 • OSUB8



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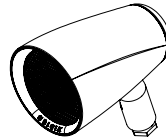
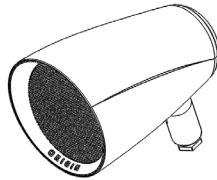
## 1. Introduction

Thank you for purchasing the Landscape LS64, LS44 Speaker and/or OSUB12, OSUB10, OSUB8 Subwoofer. At Origin Acoustics, we take pride in providing you with a high quality product. All of Origin Acoustics' speakers are designed to have excellent sound quality, longevity, and a simple installation process.

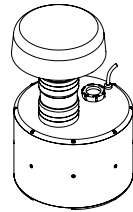
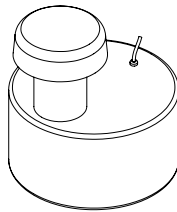
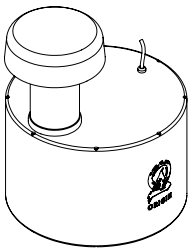
This instruction booklet covers the necessary information for a smooth installation, including: the tools you will need, step-by-step instructions for installation, troubleshooting tips for any errors that may occur, and all warranty information. If for any reason you experience problems or if you have installation questions please call us at (844) 674-4461. Hours of operation are 8:00am to 5:00pm (Pacific Time), Monday through Friday.

## 2. Specifications

MODEL	LS64	LS44
PART	<b>OLS6600</b>	<b>OLS4400</b>
Woofers	6" Poly, Passive Radiator	4 1/2" Poly
Tweeter	1" Titanium	3/4" Titanium
Frequency Response	60Hz-20kHz	80Hz-20kHz
Power RMS	50 Watts	50 Watts
Power Peak	150 Watts	150 Watts
Impedance	70V   8 Ω	70V   8 Ω
Transformer Taps	70V – 50W/25W/12.5W/6.25W	70V – 30W/15W/7.5W/3.75W
Dimensions	ø 7" X 11" L (ø 178 x 279 L mm)	ø 5 5/16" X 8 5/16" L (ø 135 x 211 L mm)



MODEL	OSUB12	OSUB10	OSUB8
PART	<b>OSUB12000</b>	<b>OSUB10000</b>	<b>OSUB8000</b>
Woofers	12" Poly	10" Poly	8" Poly
Frequency Response	23Hz-100Hz	32Hz-100Hz	39Hz-100Hz
Transformer Taps	300 Watts	300 Watts	100 Watts
Impedance	70V   8 Ω	70V   8 Ω	70V   8 Ω
Dimensions	ø 17 3/4" x 23 1/2" H (ø 451 x 597 H mm)	ø 15 3/4" x 21 1/2" H (ø 400 x 546 H mm)	ø 12 13/32" x 21 3/16" H (ø 315 x 538 H mm)



### 3. Recommended Tools

- Direct Burial Wire
- Wire Stripper
- Shovel
- Speaker Wire
- Measuring Tape
- Screwdrivers

### 4. Wire Recommendation

The gauge of wire used can have an impact on the performance of your speakers. Use a multi-stranded wiring designed for amplifier to speaker connections. Which gauge to select depends on the length of wire to be used on any particular speaker. The longer your run is, the larger your wire size must be.

Wire Length	Wire Gauge
0 -100' (0 - 30m)	16
50 - 150' (15 - 45m)	14
Over 100' (30m)	12

### 5. Speaker Wire Tips

You will need a wire that has at least two conductors; one that can be identified as the positive and the other as the negative. All two conductor wires have some means of identifying which conductor is which, but at times this identification may be subtle. It's crucial that you keep track of which wire you use for positive (+) and negative (-). Typically if the wires are colored red and black, the red wire is used for positive and the black wire is used for negative, but sometimes other

colors or patterns are used. You can choose whichever color of wire you want to be positive and negative as long as you remain consistent throughout the install.

On both your amplifier and your speaker the connectors will be identified as red for positive and black for negative. It is very important to look carefully at the speaker wires and be certain that the same wire that is attached to the positive connector in the amplifier is attached to the positive connector in the speaker.

## 6. System Planning

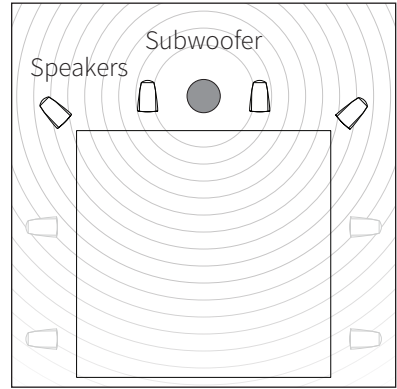
The Landscape satellite speakers and subwoofers should be strategically placed to evenly distribute sound throughout the outdoor area. Fully plan out the locations of all satellite speakers, subwoofers and buried wires before beginning the installation process.

Origin satellite speakers have been specially designed so that you can set them in the 70V configuration for large installs, or for small installs they can be set to 8Ω for use with a standard AV receiver. (If using the OSUB8, 10 or 12 in 8 Ohm we recommend using a dedicated subwoofer amplifier. \*See Origin SUBA150, SUBA500)

The first step to locating your speakers is to plan the speaker layout. Origin Acoustics 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](mailto:sales@originacoustics.com) for more information.) If, however, you want to plan the layout yourself, here are some guidelines.

## 6a. Speaker Location

Satellite speakers should be fairly evenly spaced and aimed so they cover the listening area uniformly. One satellite speaker will provide sound to about 250 to 500 sq ft, depending on your loudness requirements. Origin makes mounting hardware available so that you can easily and securely locate satellite speakers on the ground, flat surfaces like walls or even on trees. You should avoid placing them next to high-pressure sprinklers.



## 6b. Subwoofer Location

Select a location for the subwoofer somewhat near the middle of the satellite speaker arrangement. One subwoofer will provide bass to about 1000 to 2000 sq ft. When using multiple subwoofers, space them out evenly and about equal-distance from the listening area. Subwoofers should be positioned away from standing water.

## 7. 70V Wiring & Setup

- Use 1 SEPARATE wire run for: **SUBWOOFERS**
- Use ANOTHER wire run for: **LS SATELLITES**

### 7a. 70V Installation Notes

- **THE SUBWOOFERS AND SATELLITES WILL BE RUN IN PARALLEL.**

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.

### 7b. Mono or Stereo Setup

- Consider whether you will be running the satellites in mono or stereo.

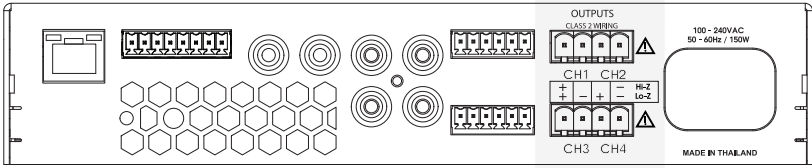
In many applications the listener will never be equidistant from a left and right speaker, so mono may be the best option.

(For example, if you are using the PROA250.2 amp, it offers four independent channels, so either option is viable.)



# 7c. 70V Hi-Z Example Wiring Diagram

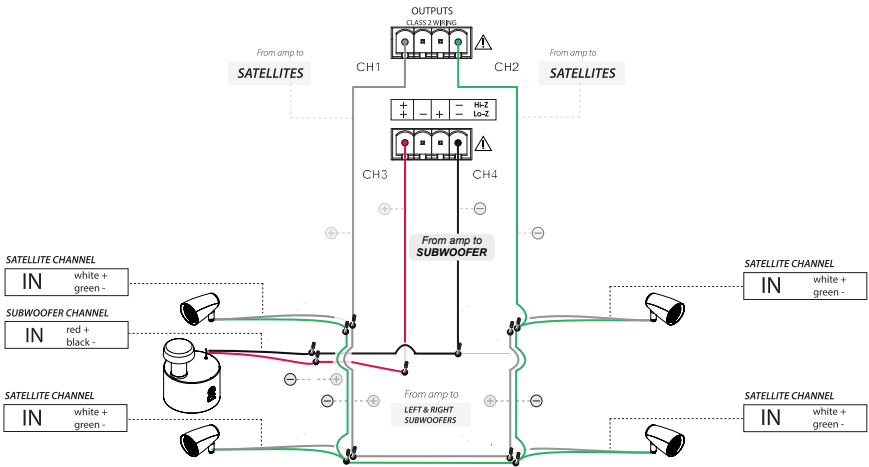
4 X LS64 + 1 X OSUB12 HI-Z WIRING WITH PROA250.2 AMP  
(SET TO HI-Z 70V OUTPUT MODE)



(LS64 ARE USING 50W TAP SETTING, OSUB12 IS SET TO 70V SW)

## Amp Output mode set to Hi-Z -70V [Bridge mode]

- OUTPUT CH1/CH2 for Satellites
- OUTPUT CH3/CH4 for Subwoofers



## 2 CHANNEL SETUP

**PLEASE:**

**CONTACT OUR CUSTOMER SERVICE FOR ANY INQUIRY REGARDING THE SETUP.**

## 7d. 70V System Notes

70 Volt systems are advantageous when the design calls for multiple speakers from the same amplifier and/or long-distance wire runs. These LS & OSUB Collection 8Ω / 70V Landscape Speakers feature multiple taps off the transformer, adjusted by a rotary switch on the back face of the speaker. The higher the wattage selected, the more output will be generated by the speaker.

A simple calculation is used to determine how many speakers can be driven on a single amplifier channel. First, for safety purposes, it is recommended to make the calculations based on 80% of the amplifiers rated power.

- *For example, a 500-watt amplifier would safely deliver 400 watts of usable power ( $500 \times 0.8 = 400$ ). Now it is simply a matter of dividing 400 by the tap setting of the speakers.*
- *For example, if the speakers are set at a 15W tap, the amplifier would be capable of driving 26 speakers per channel. At a 30W tap that would be 13 speakers. At a 60W tap that would be 6 speakers and so on.*

As you can see, if you need coverage over a wide area and it requires numerous speakers, a 70V system presents a tremendous advantage. However, it should be noted that the higher the wattage tap, the higher the fidelity and the greater SPL that can be delivered from each speaker.

**THEREFORE, IT IS BEST TO DETERMINE THE TOTAL NUMBER OF SPEAKERS NEEDED AND SET THE TAPS AS HIGH AS POSSIBLE WITHIN THE AMPLIFIER'S POWER OUTPUT RATING.**

As mentioned, the rotary switch used to adjust the tap setting is located on the back face of the speaker. For this reason, it is best to leave the back cover off until all of the tap settings have been properly adjusted. The tables below lists the power tap settings for each model. The same settings are reflected on the rotary switch on the back face of speaker.

Model	Position	1	2	3	4	5
LS64	70V		50W	25W	12.5W	6.5W
	8Ω	8Ω	-	-	-	-

Model	Position	1	2	3	4	5
LS44	70V		30W	15W	7.5W	3.75W
	8Ω	8Ω	-	-	-	-

**NOTE:** The tap setting determines how much wattage each speaker will draw from the amplifier. When daisy-chaining multiple speakers: add the combined wattages of all tap settings, to determine the wattage draw on the amplifier. **The combined total wattage should NEVER exceed the wattage rating of the amplifier.**

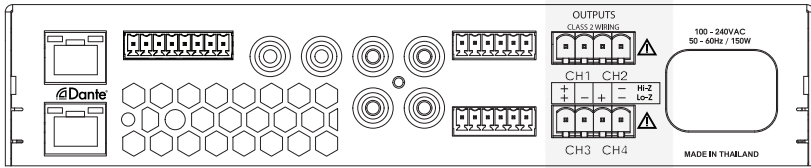
**WARNING: THE Ω POSITION CANNOT BE USED WITH A 70V AMPLIFIER AS IT WILL DAMAGE THE CROSSOVER & SPEAKER.**

*Should you be uncomfortable designing or installing a 70V system, or if you have any questions, please contact our Technical Assistance Team at Origin Acoustics.*

*See page 16 for Contact Information.*

# 7e. Small System: Lo-Z Example Wiring Diagram

For a smaller system if you are connecting a 4.1 system, then you will need to use a 4 ohm stable amplifier, and all speakers and subwoofer must be set to 8 ohm. If your system is a 2.1 system your standard AV amplifier will power the speakers and subwoofer set to 8 ohm. **(No more than two speakers per channel)**

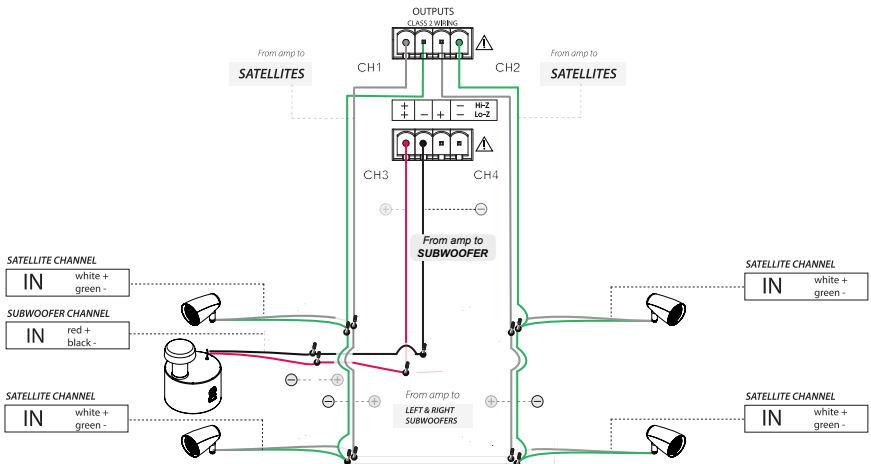


## Amp Output mode set to Lo-Z

- OUTPUT CH1/CH2 for Satellites
- OUTPUT CH3 for Subwoofers

4 X LS64 + 1 X OSUB12 LO-Z WIRING WITH PROA250.2 AMP

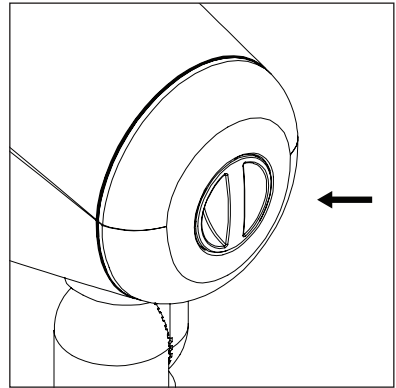
(SET TO LO-Z OUTPUT MODE)



2 CHANNEL SETUP

## 8a. Satellites Installation & Tap Selection

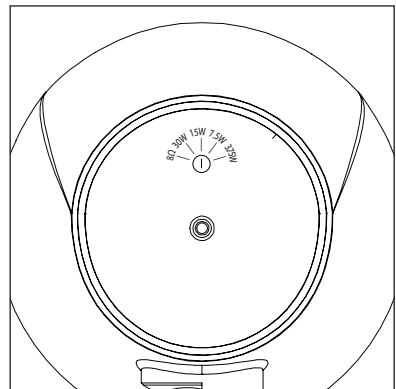
Install the satellite speakers with their mounts. (Depending on the location and type of mount, you may want to connect the wires to the satellite speakers first.)



To aim the satellite speaker up and down, loosen the screw on the pole until the satellite speaker can be aimed, and then tighten it when it's facing the appropriate direction. To prevent water damage, angle the satellite speaker less than 45 degrees up.

To aim the satellite speakers side to side on the tree or surface mount, the satellite speaker first should be screwed fully to the mount. Then, loosen it until it's facing the right direction. Move the bolt just until it's snug against the mount.

***To remove the back cover and access the wattage controls, unscrew the knob on the back, and adjust the speaker output.***



***Do not set it to 8 ohm unless you're planning on using the "Small System Option" discussed previously.***

When reattaching the back panel, make sure it's oriented properly, or it may not fit.

## 8b. Subwoofers Installation & Tap Selection

When you've decided on a subwoofer location, you're ready to dig its hole.

**OSUB8: 14" diameter, 15" deep**

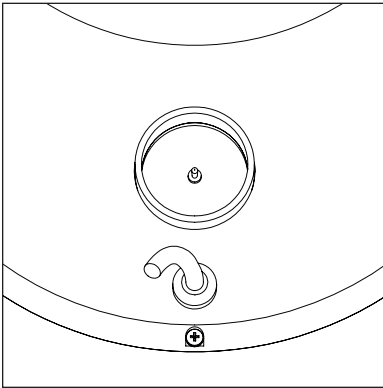
**OSUB10: 20" diameter, 15" deep**

**OSUB12: 22" diameter, 17" deep**

Use loose dirt to level the subwoofer. The subwoofer shouldn't be in contact with large rocks or large empty holes. Using the pipe clamp, attach the pipe to the subwoofer. Do not lift the subwoofer by holding the port tube as this could damage the subwoofer.

***All of Origin's OSUB in ground subwoofers can be switched from 8 Ohm or 70V. Once you decide what type of system you are going to run (8ohm or 70v) please adjust the switch on the top of the OSUB located under the cap.***

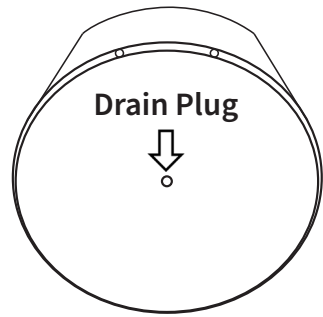
***Note: the default position for all satellites and subwoofers is 70V.***



## 8c. Optional Drain Plug

The OSUB loudspeaker come with a drain plug inserted at the bottom of its sub-woofer enclosure. If there is water ingress for any unavoidable reason, removing the drain plug will allow for water to drain out. The drain plug is easily removable with a utility knife.

Fully plan out the locations of all buried subwoofers and wires before beginning the installation process., and consider whether or not the Drain Plug may be necessary.



### OPTION 1: DRAIN PLUG REMAINS IN THE SUB ENCLOSURE

This option is recommended:

- In applications where ground water is at shallow depths and expected to rise easily above ground level or areas with overall very wet soil.

e.g. Areas of Houston, Louisiana

## OPTION 2: DRAIN PLUG IS REMOVED FROM THE SUB ENCLOSURE

This option is recommended:

- In applications with dry soil where occasional water may accidentally enter the enclosure. Use of gravel and sand will allow any water that gets into the sub enclosure to properly escape.

e.g. Las Vegas, Inland Southern California, Southwest desert

### For bollard with drain plug removed:

1. Dig a hole for the subwoofer, about 18" in diameter and 18" deep.
2. Lay gravel rock (3/8" size recommended) for a depth of min. 3" below the bottom of subwoofer enclosure.
3. Place the subwoofer as level as possible and not tilted.
4. Take care to not block the drain hole by direct contact with gravel rock.
5. Use 2" depth of loose dirt to cover the top of subwoofer enclosure.

**NOTE: DO NOT BURY THE ENCLOSURES UNTIL ALL WIRING HAS BEEN COMPLETED.**



## 9. Troubleshooting

If possible, it's often good to try to isolate the problem first. For example, if you're playing a DVD on a television and there's no sound, try connecting an MP3 player to the system to see if that works. 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.

<b>Problem</b>	<b>Possible Cause</b>
<b>No Sound</b>	The volume may be turned down or muted. Check the volume settings on both the amplifier and the television/computer/CD player/etc.
<b>No Sound</b>	Make sure the proper source is selected on the amplifier or receiver.
<b>No Sound</b>	Check the cord connecting the amplifier with the source. The cord may be damaged or plugged into the wrong input or output.
<b>No Sound</b>	Check the wires connecting the amplifier with the speakers. Make sure they're connected properly and not damaged in any way.
<b>Poor Sound Quality</b>	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.
<b>Poor Sound Quality</b>	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.
<b>Poor Sound Quality</b>	Try changing sources to be certain that the selection you've chosen is a good quality recording.

## 10. 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](mailto: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 Origin Acoustics 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.

## 11. Limited 5 Year Warranty

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

If the product is determined to be defective, it will be repaired or replaced at Origin Acoustics' 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; Origin Acoustics will not be responsible for any such related costs.

### 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.originacoustics.com](http://www.originacoustics.com) for the latest information.**

## **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

## **12. Return Process**

Before making any return attempts, it is required that you first contact Origin Acoustics customer support team. Return product to Origin Acoustics 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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