

**LDG RU-4:1  
200 Watt Unun**



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## INTRODUCTION

LDG pioneered the automatic, wide-range switched-L tuner in 1995. From its laboratories in St. Leonard, Maryland, LDG continues to define the state of the art in this field with innovative automatic tuners and related products for every amateur need.

Congratulations on selecting the LDG RU-4:1 Unun. Your LDG Unun allows you to connect longwires and vertical antennas to your LDG tuner. The RU-4:1 provides a 4:1 impedance transformation, and is especially designed for use with the LDG S9 series of vertical antennas. In cases where the antenna is already resonant, the RU-4:1 may be the only thing you need to connect your antenna directly to your transceiver.

## SPECIFICATIONS

- Compact, sturdy construction
- SO-239 jack for coax input
- Two twist-on 5-way binding posts for connection to antenna
- Water-resistant; can be made waterproof for outdoor use
- Frequency coverage: 1.8 - 30 MHz
- Power rating: 200 watts continuous
- Weight: 6 oz.
- Dimensions: 5”L x 2.5” W x 1.25” H
- Impedance transformation 4:1

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## AN IMPORTANT WORD ABOUT POWER LEVELS

The RU-4:1 is rated at 200 watts maximum peak power input *at most*. Many ham transmitters and transceivers, and virtually all amplifiers, output well over 200 watts. Power levels that significantly exceed specifications will definitely damage or destroy your RU-4:1. If your Unun fails during overload, it could also damage your transmitter or transceiver. Be sure to observe the specified power limitations.

### IMPORTANT SAFETY WARNING

**Never install antennas or transmission lines over or near power lines. You can be seriously injured or killed if any part of the antenna, support or transmission line touches a power line. Always follow this antenna safety rule: the distance to the nearest power line should be at least twice the length of the longest antenna, transmission line or support dimension.**



## Installation

The RU-4:1 Unun has an SO-239 coax connector at the bottom, and two 5-way binding posts at the top. The coax connector connects to your radio or antenna tuner. The binding posts are for connection to your antenna. The red terminal is for the antenna RF “hot” side, and the black terminal is for RF ground.

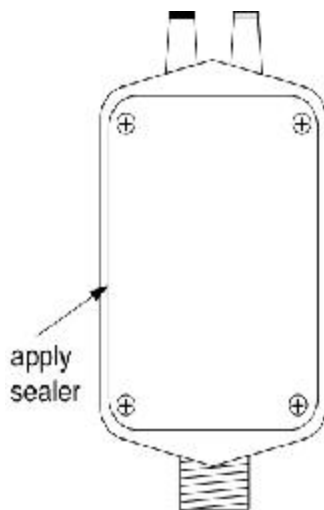
When connecting to an LDG S9 series vertical antenna, connect the black terminal to the radials, and the red terminal to the vertical element.

LDG strongly recommends that you use a high-quality, properly installed lightning arrestor in all antenna feedlines.

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## WATERPROOFING THE RU-4:1

As shipped from LDG, the RU-4:1 is water-resistant, but is not water-proof. There are seals under the SO-239 and the binding posts. If the unun is mounted with the back side facing down (text side facing up), it is fairly water resistant. To make the RU-4:1 completely watertight, turn the unun over, and apply a bead of silicone caulking material (available at most hardware stores) around the back plate, and allow it to cure before use.



## CARE AND MAINTENANCE

The RU-4:1 unun is essentially maintenance-free. Power limits in this manual should be strictly adhered to. The outer case may be cleaned as needed with a soft cloth slightly dampened with household cleaning solution. The RU-4:1 can be damaged by temperature extremes, water, impact, or lightning discharge. LDG strongly recommends the use of a good quality, properly installed lightning arrestor in the antenna lead.

## TECHNICAL SUPPORT

The LDG customer support staff is ready to answer your product question by telephone and by e-mail. We know that you will enjoy your product even more knowing LDG is ready to answer your questions as the need arises.

LDG regularly updates on-line information so the best on-line support information is available all day and every day.

The LDG website provides links to product manuals, just in case you lose this one! When you are thinking about the purchase of other LDG products our website also has complete product specifications and photographs you can use to help make your purchase decision. Don't forget the links to all of the quality LDG Dealers also ready to help you make that purchase decision.

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## **TWO-YEAR TRANSFERRABLE WARRANTY**

Your product is warranted against manufacturer defects in parts and labor for two full years from the date of purchase. This two-year warranty is also transferable. When you sell or give away your LDG product, give the new owner a copy of the original sales receipt and the two-year warranty goes with the new owner.

There is no need to complete a warranty card or to register an LDG product. Your product receipt establishes eligibility for warranty service, so save that receipt. Send your receipt with the product whenever you send your product to LDG for repair. Products sent to LDG without a receipt are considered requests for out-of-warranty repair.

LDG does not warranty against product damage or abuse. This means that a product failure, as determined by LDG, to be caused by the customer or by other natural calamity (e.g. lightning) is not covered under the two-year warranty. Damage can be caused by failure to heed the product's published limitations and specifications or by not following good Amateur practice.

## **OUT OF WARRANTY SERVICE**

If a product fails after the warranty period, LDG wants to help you get it fixed. Send the product to us for repair any time you like. We will determine what needs to be done and based on your instructions, either contact you with an estimate or fix it and contact you with a request to pay any repair charges. Please contact LDG if you have any questions before you send us an out-of-warranty product for repair.

## **RETURNING YOUR PRODUCT FOR SERVICE**

Returning a product to LDG is easy. We do not require a return merchandise authorization, and there is no need to contact LDG to return your product. Visit the LDG web site and download the LDG Product Repair Form. On the Repair Form tell the LDG technicians exactly what happened or didn't happen and why you believe the product needs servicing. The technician attempts to duplicate the problem(s) you had based on how well you describe it so take the time to be accurate and complete.

Ask your shipper for a tracking number or a delivery verification receipt. This way you know the product arrived safely at LDG. Be sure to give us your email address so our shipper can alert you online when your product is en-route back to you. Please be assured that our staff makes every effort to complete repairs ahead of our published wait time. Your patience is appreciated.

Repairs can take six to eight weeks, but are usually faster. The most recent information on returning products for service is found on the LDG website under Support, then Tech Support. Send your carefully packaged unit with the Repair Form to:

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<http://www.ldgelectronics.com/>