



**LEUPOLD**  
AMERICA'S OPTICS AUTHORITY®

## RX®-650 Digital Laser Rangefinder User Manual

### Introduction

Congratulations! You have purchased a Leupold RX-650 digital laser rangefinder that has been designed by Leupold's engineers and designers to be the best rangefinder in its category, and to provide you with years of solid performance in the field. Following are detailed instructions regarding the proper use and employment of your RX rangefinder. To ensure top performance for the life of the product, please read these instructions before operating your RX-650.

The RX-650 features include scan mode.

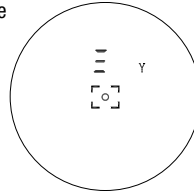
### How The RX-650 Works

The RX-650 is a top-quality 6x20mm monocular that incorporates the additional benefit of a state-of-the-art laser rangefinder capable of measuring the distance of a deer-sized animal from 5 yards to 550 yards, an inanimate object from 5 yards to 600 yards, and a reflective target from 5 yards to 650 yards. The rangefinder emits a series of invisible, infrared energy pulses that are reflected off the selected target back to the optical unit. State-of-the-art circuitry and precision computing circuits are used to calculate the distance by measuring the time it takes for each pulse to travel from the RX-650 to the target and back.

### Safety and Operation Precautions

The Leupold RX-650 6x20mm rangefinder employs an eye safe FDA Class 1 and IEC Class 3R laser in its operation. Even so, there are a few precautions that are important to remember:

- When you see the display through the eyepiece, please be aware that the product is active and emitting an invisible laser and the laser aperture should not be pointed toward anyone
- The unit will produce an audible click when activated to notify the user that the rangefinder is emitting an invisible laser
- Do not depress the POWER button while aiming at a human eye or while looking into the optics from the objective side
- Do not leave the rangefinder within the reach of small children
- Do not take the product apart as it has a self-protection device in the electronic control module and may cause an electric shock
- Do not attempt to use any power source other than a 3V Lithium CR2 battery — the RX-650 rangefinder is designed to prohibit accessing any other external power supply
- Read this instruction manual in its entirety before using this rangefinder. If the product is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired

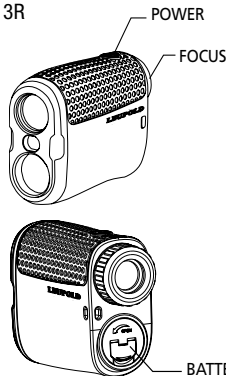


**Caution:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser radiation exposure





### RX-650 Features at a Glance

- Laser Radiation: FDA Class 1 / IEC Class 3R
- Measurement Range: 5 yds – 650 yds
- Measuring Time: Less than 1 second
- Auto Power Off after 5 seconds
- Power: 3V Lithium CR2 battery
- Battery Life: At least 5,000 actuations
- Accuracy: +/- 1 yard/meter to 125 yards/meters
- The RX-650 is waterproof



### Battery Power Status Indicator

To determine your battery's power level, look for the following indicators:

- FULL – Between full power and half power, no battery status indicator will be displayed.
-  HALF – A half-full bar indicates your battery has reached half-capacity.
-  NO POWER – If the battery bar is empty, and there is no data displayed above the bar, your battery is dead and you must replace it. The battery status bar will flash and the unit will shut down when no power remains.

### Measuring Distance With The RX-650

Measurement of distance with the RX-650 is a very simple operation:

- View the object of interest through the monocular
- Depress the POWER button to power up the unit
- Align the reticle over the object being viewed
- Depress the POWER button again – this will cause the laser to activate
- Read the distance as shown in the image field

### Continuous Measurement Of a Moving Target/ Scan Mode:

- Follow the instructions for “Measuring distance...” as explained previously
- Once the target has been measured, continue to hold down the POWER button and follow the object as it moves
- The distance will automatically update as long as the POWER button is continuously depressed
- This procedure can also be used to obtain the range of multiple animals or objects; simply move the reticle from one target to another while holding down the POWER button

### Clearing The Last Distance Obtained:

The last range reading does not need to be cleared before reading another object's distance. Simply aim at the new object using the reticle, depress the POWER button and hold until the new range reading is displayed.

Following is a reference table listing the ranges of the RX-650 model under different conditions:

MAXIMUM RANGE	
CONDITION	RX-650
Reflective Target (yd/m)	650/594
Trees (yd/m)	600/548
Deer (yd/m)	550/502

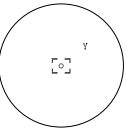
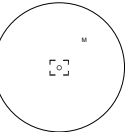
Surface texture, color, size, and shape of the target all affect reflectivity, which in turn affects the maximum range of the instrument. As a rule of thumb, brightly colored targets are much more reflective than darker

targets. Tan game coats are more reflective (and thus provide a more solid reading) than a black roof. A shiny surface is more reflective than a dull surface. Smaller targets are more difficult to range than larger targets. Light conditions, haze, fog, rain, and other environmental conditions can all affect ranging performance. Any factor which degrades air clarity will reduce the maximum effective range. The sun generates infrared energy that can degrade ranging performance in bright conditions or when ranging towards the sun.

### Unit Output

This mode is used to choose between yards and meters as the preferred unit of measure.

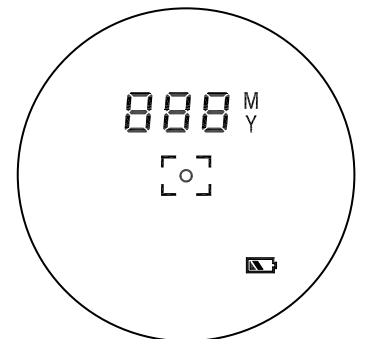
To set the unit of measure, with the RX-650 turned OFF, push and hold the POWER button for approximately 10 seconds. The unit of measure will toggle from yards to meters or vice versa. Release the POWER button when the preferred unit of measure is shown.



### RX-650 Specifications

The RX-650 digital laser rangefinder provides useful modes to tailor performance to the conditions you experience in the field. Model features are identified below.

RX-650	
Magnification	6x
Line of Sight Distance (LOS)	Yes
Yards / Meters Mode	Yes
Scan Mode	Yes
Battery Life	>5,000 Actuations
Weight	7.0 oz
Dimensions (Inches)	3.8 x 2.9 x 1.5
Battery Status Indicator	Yes
Warranty	2 Years
Waterproof	Yes
Accuracy +/- 1 Yard @ <125 yds.	Yes



\*Display shown with all possible modes visible

## Cleaning/Maintenance

Blow away dust or debris on lenses, or use a soft lens brush (such as the one found on the Leupold LensPen). To remove fingerprints, water spots or tougher dirt, use a soft cotton cloth or the cleaning end of the Leupold LensPen. A lens tissue with lens cleaning fluid may be used for more stubborn dirt. Always apply cleaning fluid to the cleaning cloth, never directly to the lens.

To insert a new battery, remove battery cover (shown in diagram) and remove exhausted battery. Insert new CR-2 battery, negative terminal first, into the battery compartment. Close battery cover.

To focus the digital laser rangefinder, turn the eyepiece left or right (you will feel and hear the clicking of the diopter, indicating a change to the focus has been made) until crisp focus is achieved.

RX-650 model is waterproof.

The RX-650 includes a lanyard and is equipped with a lanyard attachment for added security in the field.

## Helpful Hints for Using the Leupold RX-650 Digital Laser Rangefinder

### Rangefinder does not provide range.

- Make sure that the POWER button is being depressed
- Make sure that nothing, such as your hand or finger, is blocking the lenses — as this could interfere with the emission and reception of the laser pulses
- Make sure unit is held steadily while depressing the POWER button
- Make sure the target is at least 5 yards away
- Target may be beyond maximum distance

## Warranty/Repair

Your Leupold RX-650 Series digital laser rangefinder is warranted by the Leupold Gold Ring™ Electronics Warranty, and is protected from defects in materials and workmanship for TWO YEARS from the date of purchase. In event of a need for service or repair, please contact Leupold Product Service at:

BY PARCEL SERVICE:	BY POSTAL SERVICE:
Leupold Product Service 14400 NW Greenbrier Parkway Beaverton, OR 97006-5791 USA	Leupold Product Service P.O. Box 688 Beaverton, OR 97075-0688 USA

For product questions, consult the Leupold Web site at:  
[www.leupold.com](http://www.leupold.com), or call (503) 526-1400 or (800) LEUPOLD (538-7653).

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