

*Leica*

my point of view

*Leica*

Prüfzertifikat  
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Leica Camera AG  
Oskar-Barnack-Straße 11  
D-35606 Solms  
[www.leica-camera.com](http://www.leica-camera.com)  
[info@leica-camera.com](mailto:info@leica-camera.com)  
Telephone +49 (0) 6442-208-0  
Fax +49 (0) 6442-208-333

920 546 X/02/FZ/L

Werk. Nr.



4 022243 405158

40515

Fabr. Nr.



1129467

## Leica Camera AG Qualitätssicherung

Dieses LEICA Produkt wurde von erfahrenen Fachkräften gewissenhaft in mehreren Schritten geprüft.

This LEICA product was meticulously examined by experienced professionals at several stages of production.

Ce produit LEICA a été consciencieusement contrôlé, au cours et en fin du processus de fabrication, par des spécialistes expérimentés.

  
Unterschrift/Sign/Signature



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LRF 1200 scan



## Foreword

Dear Customer

Worldwide, Leica stands for superb optical quality, close-tolerance precision engineering, absolute reliability, and long product life.

This is why we wish you every success and a great deal of pleasure in using your new Leica Rangemaster.

Its functional design makes it easy to use and offers you an unique visual experience.

## Nomenclature

- 1 Housing with armouring
- 2 Diopterscale
- 3 Distance measurement release button
- 4 Carrying strap loops
- 5 Eyepiece with eyecup
- 6 Battery compartment cover with Meter / Yard selector underneath
- 7 Laser transmitter optics
- 8 Lens for viewing optics
- 9 Laser receiver optics

### Warning notice

As with any telescope, to avoid damaging the eyes, do not look directly at sources of bright light through the Leica Rangemaster.

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## Introduction

We hope you will enjoy your Leica Rangemaster. The Rangemaster sends out pulses of laser light, which are in the infrared wavelength, harmless and invisible to the naked eye. Some of these pulses are reflected back. The built-in micro-processor calculates the object distance from these reflected signals. The Leica Rangemaster is equipped with superb 7x-magnification optics, which enable good targeting even in difficult conditions.

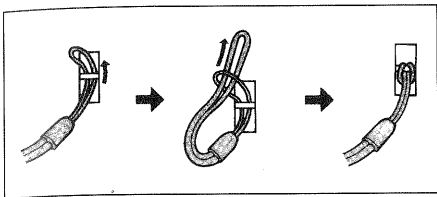
Please read the following instructions to get the maximum benefit from this versatile and high quality laser range finder.

### **LEICA RANGEMASTER 900 scan**

**Order-No. 40 515**

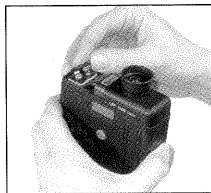
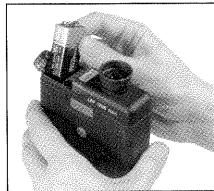
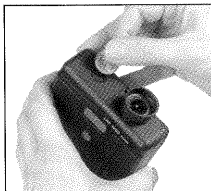
### **LEICA RANGEMASTER 1200 scan**

**Order-No. 40 525**



### Fitting the wrist strap

Push the smaller loop through the eyelet (4) on the housing of the Leica Rangemaster. Then, thread the longer loop through the smaller loop and pull it tight so that the strap is securely attached round the eyelet on the housing.



### Battery installation

The energy supply for the Leica Rangemaster is a 9 V energy block (type E-Block e.g. 6LR61, 6AM6, etc.). We recommend using an alkaline battery. Use a coin, to open the battery compartment cover and insert the battery with the contacts facing up. Ensure that the battery contacts line up with the terminals on the connector. Finally, push the connector home.

**Warning:**

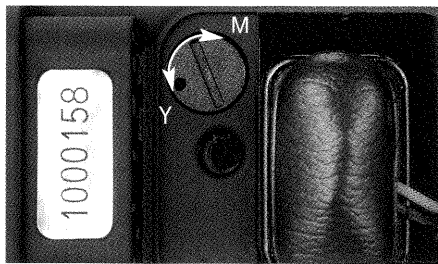
Battery performance suffers in the cold. Therefore, at low temperatures, it is a good idea to keep the Leica Rangemaster in an inside pocket (close to the body) and fitted with a fresh battery.

**Note:**

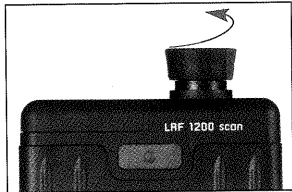
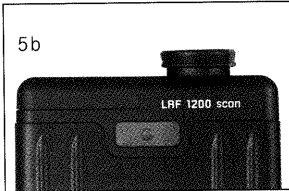
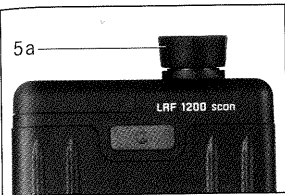
Rechargeable batteries are not recommended. Used batteries may not be disposed of as normal, household waste as they contain hazardous materials that are environmentally harmful. In order to ensure they are properly recycled, they should be returned to the supplier or taken to a special waste disposal center.

**Battery state indicator**

The distance display and the target mark flash when battery voltage is low. Over 100 further measurements (at a progressively reducing range) can be taken after the display first starts to flash.

**Meter/Yard selector**

The Leica Rangemaster allows the distance to be displayed in meters or in yards. To change the display, set the position of the selector screw (2) inside the battery compartment to M = Meters or Y = Yards.



### **Use with and without spectacles**

If you are not wearing glasses, leave the rubber eyecup (5a) folded up, as it comes. This position gives the correct distance between the eye and the Leica Rangemaster.

If you are wearing glasses, fold down the rubber eyecup (5b).

### **Diopter compensation**

The diopter compensator allows you to adjust the sharpness of the target mark to suit you best. Simply target the Leica Rangemaster on some far away object and turn the diopter compensator until the target mark is as sharp as possible. The target mark can be seen by pressing the release button (3). The degree of compensation can be read off the “+” or “-” scale on the rubber eyecup. Compensation within the range  $\pm 4$  diopters is possible.





### **Distance measurement**

To measure the distance to an object, it must be perfectly targeted. To do this, activate the target mark by pressing the release button (3) once. The target mark remains lit for about 4 seconds after letting go the release button. The target mark remains permanently lit as long as the button is held down. Whilst the target mark is lit, train the Leica Rangemaster on the object and press the release button a second time; the distance is then measured and displayed. The target mark goes out briefly during the measurement. A new measurement can be made at any time, as long as the target mark is lit, by pressing the release button once again. If the object

is less than 10m away, is out of range or does not provide enough reflection, then "---" appears on the display. The Leica Rangemaster switches itself off as soon as the display disappears.

### **Scan mode**

With the Leica Rangemaster, continuous measurements can be made. If the release button (3) is held down the second time it is pressed, after approx. 0.5 seconds the unit switches to scan mode, and then takes continuous measurements. This is indicated by the changing display: a new measured value is output around every 1.5 seconds.

Scan mode is particularly practical when measuring to smaller targets.

### **Note:**

Due to the constant measurements, the power consumption is greater in scan mode than for single measurements.

## Operating range and accuracy

The measuring accuracy of the Leica Rangemaster is up to  $\pm 1$  Meter/Yard. The maximum range is achieved with a well reflecting object and unaided visibility of 10km. The operating range is influenced by the following factors:

Range	longer	shorter
<b>Color of object</b>	white	black
<b>Angle of object</b>	perpendicular	acute
<b>Size of object</b>	larger than measuring beam	smaller than measuring beam
<b>Sunlight</b>	weak (cloudy)	strong (midday sun)
<b>Atmospheric conditions</b>	clear	hazy
<b>Shape of object</b>	uniform (house wall)	irregular (bush, tree)

Accuracy is as follows in sunshine and good visibility:

	<b>Rangemaster 900 scan</b>	<b>Rangemaster 1200 scan</b>
<b>Range</b>	10 m/36ft to approx. 823m/900yds	10 m/36ft to approx. 1.097m/1.200yds
<b>Accuracy</b>	$\pm 1$ m/yd up to 200m/yds $\pm 2$ m/yds up to 600m/yds $\pm 0.5\%$ over 600m/656yds	$\pm 1$ m/yd up to 400m/yds $\pm 2$ m/yds up to 800m/yds $\pm 0.5\%$ over 800m/875yds

## **Rangefinder care**

The rangefinder requires no special care. Any large particles of dirt, such as sand, should be removed with a soft brush or be blown off. Finger marks and other smears can be cleaned off the lenses by first moistening them with a damp cloth and then wiping with a soft, clean chamois leather or lint-free cloth. The housing should be cleaned only with a damp leather. Using dry cloths can lead to an electrostatic build-up. Alcohol and other chemical solvents must not be used to clean the optics or the housing.

## Troubleshooting

Problem	Cause	Remedy
Cannot get truly round view without blurred edges	The position of the eyecup is wrong	Ensure spectacle frames are not distorting the eyecup is folded up if not wearing glasses (page 15)
Target mark not sharp	Diopter compensation was not perfect	Repeat diopter compensation adjustment (page 15)
"---" displayed when measuring distance	a) Object is out of operating range b) Insufficient reflection from the object	Consult section "Operating range and accuracy" (page 16/17)
Display flashes or no measurement is possible	Battery flat	Replace battery (page 13)

## Technical Data

	Rangemaster 900 scan	Rangemaster 1200 scan
<b>Maximum operating range:</b>	823 m/900 yds.	1097 m/1200 yds.
<b>Minimum object distance:</b>	approx. 10 m/yds.	approx. 10 m/yds.
<b>Accuracy:</b>	± 1 m/yds. up to approx. 200 m/yds. ± 2 m/yds. up to approx. 600 m/yds. ± 0.5% over approx. 600 m/yds.	± 1 m/yds. up to approx. 400 m/yds. ± 2 m/yds. up to approx. 800 m/yds. ± 0.5% over approx. 800 m/yds.
<b>Yard/Meter selection:</b>	yes	
<b>Magnification:</b>	7x	
<b>Display:</b>	LED	
<b>Diopter compensation:</b>	± 4 diopters	
<b>Usable with spectacles:</b>	yes	
<b>Dimensions (W x H x D):</b>	approx. 10.5 x 12.0 x 4.0 cm / 3 <sup>15</sup> / <sub>16</sub> x 4 <sup>4</sup> / <sub>3</sub> x 1 <sup>9</sup> / <sub>16</sub> in.	
<b>Battery:</b>	9V alkaline. Transistor E-Block (6LR61)	
<b>Laser:</b>	Class 1 LASER product according to EN and FDA	
<b>Weight (with/without battery):</b>	280 g / 320 g	
<b>Attention:</b> Do not open the main body under any circumstance!		

## **Leica Academy**

Our seminars offer participants practical information on the Leica world of values and the fascination of skilled use of Leica products.

Course programs are application-oriented and informative. They offer a wealth of practical suggestions, help, and advice.

Leica Camera AG

Leica Akademie

Oskar-Barnack-Str. 11

D 35606 Solms

Tel: +49(0)64 42-2 08 421

Fax: +49(0)64 42-2 08 425

e-mail: [la@leica-camera.com](mailto:la@leica-camera.com)

## **Leica in the Internet**

You can find up to date information about products, novelties, special events, and the Leica company on our home page in the internet:

<http://www.leica-camera.com>

## **Leica Information Service**

Should you have any technical questions regarding the use of Leica products, the Leica information service will be happy to answer in writing or by phone, fax, or e-mail:

Leica Camera AG

Informations-Service

Postfach 1180

D 35599 Solms

Tel.: +49(0)64 42-208 111

Fax: +49(0)64 42-208 339

e-mail: [info@leica-camera.com](mailto:info@leica-camera.com)