STEINER
Nothing Escapes You

English

INSTRUCTION MANUAL

M830r LRF
LASER RANGEFINDER

INFORMATION FOR YOUR SAFETY

General information:
The instrument meets the laser class 1 according to EN and FDA. It is classified as eye safe and can be used in any way. For safety precaution it should however not be pointed directly at people.

User information for the disposal of electrical and electronic equipment (private households):
This symbol on products and/or accompanying documents indicates that used electrical and electronic products are not to be mixed with ordinary household waste. Take these products to the appropriate collection point for proper handling, recovery and recycling, where they will be taken back for free. In some states, it may also be possible to hand in these products to your local dealer when purchasing a corresponding new product. The proper disposal of this product serves to protect the environment and prevents possible harmful effects on human beings and their surroundings, which may arise as a result of incorrect handling of waste. More detailed information on your nearest collection point is available from your local authority. According to state law, fines may be issued for the incorrect disposal of this type of waste.

For business customers within the European Union:
To dispose electrical and electronic equipment, please contact your dealer or supplier, who will be able to provide you with more information.

Information on disposal in other countries outside of the European Union:
This symbol is applicable only in the European Union. Please contact your local authority or your dealer if you wish to dispose of this product and enquire about how to dispose of it.

Battery disposal
- Do not dispose of batteries with household waste!
- Please use any existing return system in your local area when returning used batteries.
- Please only hand in discharged batteries.
- Batteries are generally discharged when the equipment operated with them:
  - switches off or indicates 'battery empty'
  - the battery no longer functions correctly after an extended period in use.

To prevent short circuits, cover the battery contacts with an adhesive strip.

Germany:
As a consumer, you have a legal obligation to
return used batteries. You can hand in your batteries for free
to wherever the batteries were purchased or to the public
collection points in your city or community.
You will find these symbols on batteries that contain harmful substances:
Pb = Battery contains lead
Cd = Battery contains cadmium
Hg = Battery contains mercury
Li = Battery contains lithium

Important notice for USA
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CONTENT

1 Eyepiece with rubber eyecup
2 Diopter adjustment
3 Power/Measure button
4 Set button
5 Laser transmission optics
6 Battery compartment
7 Tripod Adapter Screw

INSERTING AND REPLACING THE BATTERY

The laser range finder is powered by a type 3 volt CR 2 lithium battery.

1. To insert and replace the battery, unscrew the battery cover 6 by turning counterclockwise.
2. Insert the battery with the positive end forward (according to the symbol in the battery compartment).
3. Screw the battery cover back on by turning clockwise.

BATTERY CHARGE LEVEL

A new battery is sufficient for more than 5,000 measurements at 20°C. Depending on the conditions of use, the battery life time can be significantly shorter or longer than this. Low temperatures and frequent use of the scan mode shortens the battery life. A flat battery is indicated by a flashing measured value and target display.

Warning: Cold conditions impair the battery performance. At low temperatures, the LRF should therefore be carried close to the body and used with a fresh battery.

RANGE ESTIMATION ACCURACY

The STEINER Military M830r LRF Laser Rangefinder binocular has a measuring accuracy of up to ±1 meter/yard. The maximum range is achieved with highly reflective target objects and visibility of 10 km. The metering range is affected by the following factors:

Range	higher	lower
Color of object	white	black
Angle to object	vertical	acute
Size of object	large	small
General brightness	low (cloudy)	high (midday sun)
Atmospheric conditions	clear homogeneous	hazy inhomogeneous
Object structure	e.g. building wall	e.g. bush, tree

With sunshine and good visibility, the ranges and accuracies are as follows:

Measuring range 25 m / 27 yds up to 1700 m / 1860 yds
Accuracy ±1 m / yd up to 350 m / 380 yds
±2 m / yds up to 700 m / 763 yds
±0,5 % above 700 m / 763 yds

BUTTON FOR DISTANCE MEASURING 3

To measure the distance to an object, you must lock onto it precisely. To do this, activate the target mark by pressing the button for distance measuring **3** for approx. 3 sec. Release the button to start the measurement and the estimated range is shown on the display.

The illumination of the target will go off shortly during the measurement.

You can start a new measurement at any time by pressing the button for distance measuring **3** again.

If the object distance is less than 25 meters / 27 yards or if the range is exceeded or the object does not reflect sufficient light, the display shows '----'.

When the display turns off, the distance meter is automatically deactivated.

Note: Depending on the angle of the optical systems to each other, i.e. the set interpupillary distance, the displays may appear slightly slanted.

SET BUTTON 4

The range can be displayed either in meters or in yards, as desired. After pressing the button for distance measuring 3 a 'm' for meter or 'y' for yards is displayed next to the target marker.
To change the setting, use the SET button 4 : An extended press of the button for over 3 seconds will cause the display to start to flash and the setting to then change every time the SET button is pressed. All settings preset for the 'm' represent range displays in meters; all settings preset for the 'y' represent range displays in yards. After 5 seconds without pressing the SET button the respective setting is saved automatically.

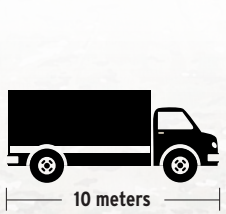
SCAN MODE

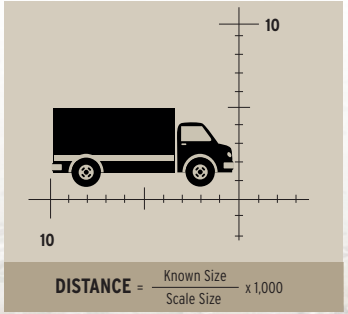
The STEINER Military 8x30 R Laser rangefinder binocular can also be used to measure in constant operation (scan mode). The scan mode is particularly helpful for measuring small or moving targets. If the button for measuring distance 3 is pressed for longer than approx. 3 seconds, the binocular switches to scan mode and then takes measurements continuously. This can then be identified from the range display which emits new measuring values approx. every 1.5 seconds.

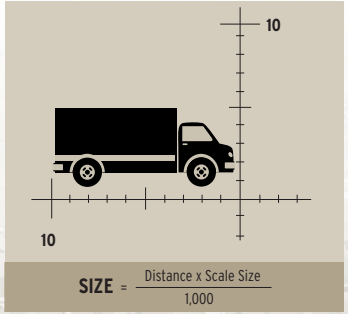
Note: Scan mode consumes more power than individual metering due to the constant metering. Scan mode switches off automatically after approx. 20 seconds in order to save the battery in case the button is pressed accidentally.

RETICLE

The right side of the binocular includes a horizontal and vertical scale reticle, graduated in mil increment markings.
In determing range, if an object fills on 10 mil unit marking on the horizontal reticle scale and is known to be 10 meters wide, the object is 1.000 meters away. If the same size object fills 20 mil unit markings, it would be 500 meters away. When this formula is used, the distance will be given in the same units of measurement (feet, meters, etc.) as is used in estimating the known size of the object. The same formula can be used to determine range with the verticle scale when the height of an object is known. The use of the verticle scale is preferred (especially on level terrain), since objects are often viewed obliquely along the horizontal axis.







CLEANING

Blow away any dust or debris on the lenses.

To remove dirt or fingerprints, clean with cleaning cloth by rubbing in a circular motion. Use of a coarse cloth or unnecessary rubbing may scratch the lens surface and eventually cause permanent damage.

For more thorough cleaning, use a lens cleaning fluid. Always apply the fluid to the cleaning cloth, never directly on the lenses.

CAUTION!

When using the binoculars, never point directly at the sun. The heat generated by the focused rays of the sun may be very harmful and might cause serious damage to your eyes permanently.

General Specification*	
Magnification	8x
Entrance pupil	30 mm
Exit pupil	3.75 mm
Eye relief	16.8 mm
Twilight factor	15.5
Luminosity	14.1
Field of view at 1,000 m angular	≥ 114 m 6.5°
Dioptric range	± 5 dpt
Resolving power	≤ 11.25“
Interpupillary distance	56 - 74 mm
Operating temperature	-20° / +60°C
Storage temperature	-40° / +80°C
Pressure resistance	0,5 bar
Reticle	Mil-Dot (SUMR)
Focus system	Ocular individual adjustment

Weight (approx.)	
Binocular	800 g
Carrying strap	60g
Objective caps	42 g
Eyepiece cover	16 g

Dimensions (approx.)*	
Height	129 mm
Width	165 mm
Depth	66 mm

Measuring range 25 m / 27 yds up to 1.700 m / 1.860 yds

Accuracy ± 1 m / yd up to 350 m / 380 yds
± 2 m / yds up to 700 m / 763 yds
± 0,5 % above 700 m / 763 yds

Laser eyesafe invisible laser according to EN and FDA class 1

* Figures correspond to an ocular adjustment of 0 dpt. and an interpupillary distance of 65 mm. Specifications are subject to change without prior notice as a result of ongoing technical development.

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