R8130

REED

INSTRUMENTS

Light Meter

WARRANTY 1 YEAR WARRANTY

Instruction Manual

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Introduction

Thank you for purchasing your REED R8130 Light Meter. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO9001 facility and has been calibrated during the manufacturing process to meet the stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.

Features

- Wide measuring range (up to 40,000 fc or 400,000 lx)
- Easy-to-read backlit LCD display
- 42-segment digital analog bargraph
- Min/Max and Relative Mode functions
- Peak and Data Hold
- Low battery indicator and auto shut off

Included

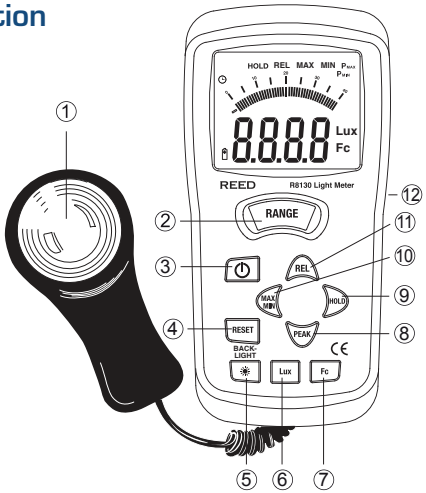
- Sensor Cover
- Protective Holster
- Carrying Case
- Battery

Specifications

Measuring Range(s):	lx: 0 to 400,000 fc: 0 to 40,000
Accuracy:	±(5% rdg.+ 0.5% Full Scale)
Repeatability:	±3%
Resolution:	lx/fc: 0.01 (Max resolution)
Response Time:	Bargraph: 13.3 times/second Numeric display: 1.3 times/second
Sensor Type:	Photo diode with spectral response filter
Spectral Response:	CIE Photopic (CIE Human Response Curve)
Spectral Accuracy:	CIE Vλ function f1'≤6%
Cosine Response:	f2' ≤2%
Display:	3 3/4" (3999) digit LCD
Digital Analog Bargraph:	Yes (42 segment)
Backlit Display:	Yes
Data Hold:	Yes
Min, Max and Relative Mode:	Yes
Peak Hold:	Yes
Overrange Indicator:	Yes
Auto Shut-Off:	Yes (after 30 mins)
Kick Stand:	Yes
Tripod Mountable:	Yes
Low Battery Indicator:	Yes
Power Supply:	9V battery
Product Certifications:	CE
Operating Temperature:	32 to 104°F (0 to 40°C)
Storage Temperature:	14 to 140°F (-10 to 50°C)
Operating Humidity Range:	10 to 80%
Dimensions:	7.4 x 2.5 x 1" (188 x 64.5 x 24.5mm)
Weight:	14.2oz (403g)

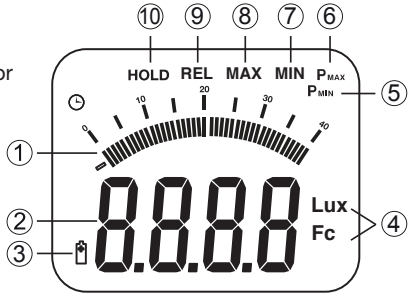
Instrument Description

1. Light Sensor
2. Range Button
3. Power Button
4. Reset Button
5. Backlight Button
6. Lux Button
7. Foot-candle Button
8. Peak Button
9. Data Hold Button
10. Max/Min Button
11. Relative Mode Button
12. Protective Holster



Display Description

1. Digital Analog Bargraph
2. Measured Value
3. Battery Capacity Indicator
4. Unit of Measure
5. Peak Min Indicator
6. Peak Max Indicator
7. MIN Indicator
8. MAX Indicator
9. Relative Mode Indicator
10. Data Hold Indicator



Operating Instructions

Light Sensor

1. The light sensor is permanently attached to the meter.
2. Remove the protective cap to expose the light sensor. When the sensor's protective cap is removed, the light sensor will begin to capture light.

Power On/Off

Press the Power button to turn power on or off.

Unit of Measure Selection

Press the **Lux** button to measure in lx units and the **Fc** to measure in Foot-candles.

Measurement Range Selection

1. Remove the protective cap from the sensor. For overhead lighting, the sensor can be placed on a desk or table top.
2. The display will indicate the light level in "Fc" or "Lux".
3. Press the **RANGE** button to select the range that provides the maximum resolution. If the 'OL' appears the light measurement is out of range. To scroll through the measuring ranges press the **RANGE** button.
4. Press the Backlight button to illuminate the LCD display if needed.

MAX/MIN

Press the **MAX/MIN** button to display the Maximum and Minimum light level values recorded during the measurement process.

1. Press the **MAX/MIN** button to enter the MAX/MIN function. The "MAX" symbol will appear on the LCD display and hold only the highest reading. The display will update only when a higher reading is measured.
2. Press the **MAX/MIN** button. The "MIN" symbol will appear on the LCD display and hold only the lowest reading. The display will update only when a lower reading is measured.
3. Press the **MAX/MIN** button again. The "MAX MIN" symbol will appear flashing and the meter will now display the current reading, but will continue to record the highest and lowest values.

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4. Press the **MAX/MIN** button again to toggle between "MAX" and "MIN" displays.
5. To exit the "MAX MIN" mode, press and hold the **MAX/MIN** button until the MAX and MIN symbols disappear.

Data Hold

Press the **HOLD** button to freeze the displayed reading. The "MANU HOLD" symbol will appear on the LCD display. Press the **HOLD** button again to resume normal operation. When the "Data Hold" function is enabled the analog bargraph will continue to display level changes.

Peak Hold

The Peak Hold feature allows the meter to captures light pulses that rise or fall down to 10µs.

1. Press and hold the **PEAK** button until "CAL" appears on the LCD display.
2. Momentarily press the **PEAK** button. The 'PMAX' symbol will appear on the LCD display. The meter will then measure and display any light pulses. The display will hold the results until a higher pulse appears.
3. Press the **PEAK** button again to display the "PMIN" values.
4. To exit the "Peak Hold" mode, press and hold the **PEAK** button until the 'PMAX' or 'PMIN' symbol disappears.

Relative Mode

Measurements can be displayed as a difference between the measured light level and a stored reference value.

1. To store a reading as a reference, press the **REL** button when the desired reference measurement is on the LCD display.
2. All subsequent displayed readings will be "relative" to the stored reference value. For example, if the reference value is 1000 and the actual light level is 1250, the meter will display 250.
3. To view the reference value, press the **REL** button again so that the "REL" symbol begins to flash. The displayed value will be the reference value.
4. To exit the Relative mode, press and hold the **REL** button until the "REL" symbol disappears.

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RESET

Press the **RESET** button to clear internal memory and exit from REL, HOLD, PEAK and MAX/MIN. The **RESET** button will also reset the auto power off timer.

Backlight

Press the Backlight button to turn the backlight on. Press the button again to turn it off.

Battery Replacement

When the low battery icon appears on the LCD display, the battery will need to be replaced. In order to replace the battery, proceed with the following steps.

1. Turn off the meter.
2. Remove the Phillips-head screw located on the battery compartment.
3. Remove the battery cover.
4. Replace the 9V battery.
5. Reinstall the battery cover.

Applications

- OSHA work environment compliance
- Cinematography and photography applications
- Museum exhibits
- Lighting system installation
- Environmental monitoring
- Interior design projects
- Industrial applications

Appendix A: Recommended Light Levels by Application

1 fc = 10.76 lx

LOCATIONS		lx	fc
OFFICE	Conference, Reception Room	200~750	18~70
	Clerical Work	700~1,500	65~140
	Typing Drafting	1,000~2,000	93~186
FACTORY	Production Line	300~750	28~70
	Inspection Station	750~1,500	70~140
	Electronic parts assembly line	1,500~3,000	140~279
	Packing Work, Entrance	150~300	14~28
HOTEL	Public Space	100~200	9~18
	Reception	200~500	18~47
	Cashier	750~1,000	70~93
STORE	Indoor Stair Corridors	150~200	14~18
	Show Window, Packing Table	750~1,500	70~140
HOSPITAL	Patient Room, Warehouse	100~200	9~18
	Medical Examination Room	300~750	28~70
	Operating Room	750~1,500	70~140

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SCHOOL	Auditorium, Indoor Gymnasium	100~300	9~28
	Classroom	200~750	18~70
	Laboratory, Library	500~1,500	47~140

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

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